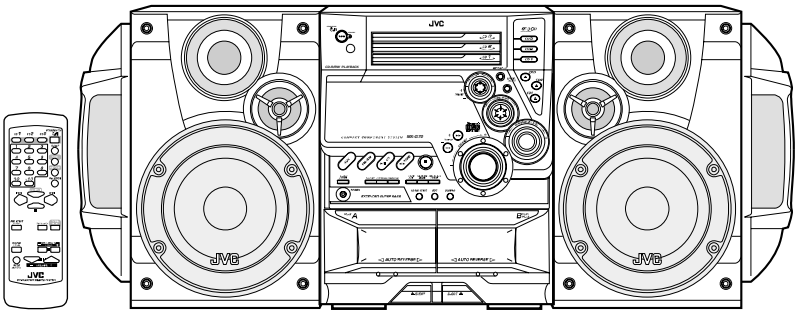
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-G70

Area Suffix
J ---------- U.S.A.
C ---------- Canada



SP-MXG70 CA-MXG70 SP-MXG70

COMPACT disc DIGITAL AUDIO

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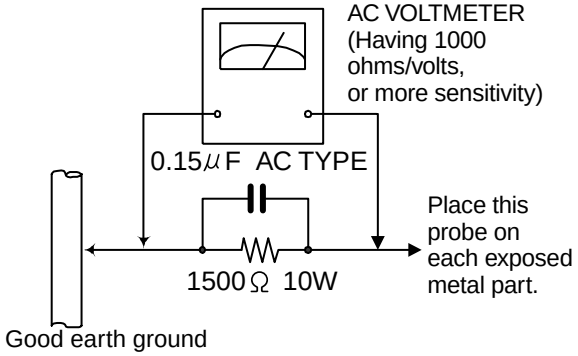
No.20920
Mar. 2001

Safety Precautions

1. This design of this product contains special hardware and many circuits and components specially for safety purposes. For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Services should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the product should not be made. Any design alterations of the product should not be made. Any design alterations or additions will void the manufacturer`s warranty and will further relieve the manufacture of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the Parts List of Service Manual. Electrical components having such features are identified by shading on the schematics and by (⚠) on the Parts List in the Service Manual. The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement parts shown in the Parts List of Service Manual may create shock, fire, or other hazards.
4. The leads in the products are routed and dressed with ties, clamps, tubings, barriers and the like to be separated from live parts, high temperature parts, moving parts and/or sharp edges for the prevention of electric shock and fire hazard. When service is required, the original lead routing and dress should be observed, and it should be confirmed that they have been returned to normal, after re-assembling.
5. Leakage currnet check (Electrical shock hazard testing)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the product (antenna terminals, knobs, metal cabinet, screw heads, headphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.
   Do not use a line isolation transformer during this check.
   - Plug the AC line cord directly into the AC outlet. Using a "Leakage Current Tester", measure the leakage current from each exposed metal parts of the cabinet , particularly any exposed metal part having a return path to the chassis, to a known good earth ground. Any leakage current must not exceed 0.5mA AC (r.m.s.)
   - Alternate check method
     Plug the AC line cord directly into the AC outlet. Use an AC voltmeter having, 1,000 ohms per volt or more sensitivity in the following manner. Connect a 1,500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground.
     Measure the AC voltage across the resistor with the AC voltmeter.
     Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and meausre the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. voltage measured any must not exceed 0.75 V AC (r.m.s.). This corresponds to 0.5 mA AC (r.m.s.).



Warning

1. This equipment has been designed and manufactured to meet international safety standards.
2. It is the legal responsibility of the repairer to ensure that these safety standards are maintained.
3. Repairs must be made in accordance with the relevant safety standards.
4. It is essential that safety critical components are replaced by approved parts.
5. If mains voltage selector is provided, check setting for local voltage.

⚠ ***CAUTION*** **Burrs formed during molding may be left over on some parts of the chassis. Therefore, pay attention to such burrs in the case of preforming repair of this system.**

Important for laser products

1.CLASS 1 LASER PRODUCT

2.DANGER : Invisible laser radiation when open and inter lock failed or defeated. Avoid direct exposure to beam.

3.CAUTION : There are no serviceable parts inside the Laser Unit. Do not disassemble the Laser Unit. Replace the complete Laser Unit if it malfunctions.

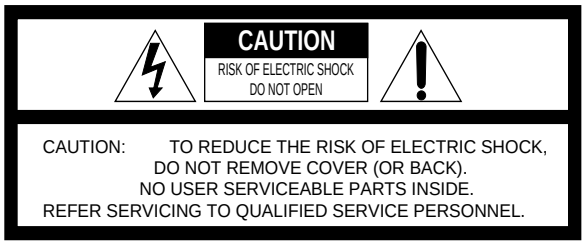
4.CAUTION : The compact disc player uses invisible laser radiation and is equipped with safety switches which prevent emission of radiation when the drawer is open and the safety interlocks have failed or are defeated. It is dangerous to defeat the safety switches.

5.CAUTION : If safety switches malfunction, the laser is able to function.

6.CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

⚠ **CAUTION** **Please use enough caution not to see the beam directly or touch it in case of an adjustment or operation check.**

Warnings and Cautions


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

For Canada/pour le Canada

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION: POUR EVITER LES CHOCS ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQUAU FOND.

Preventing static electricity

1. Grounding to prevent damage by static electricity

Electrostatic discharge (ESD), which occurs when static electricity stored in the body, fabric, etc. is discharged, can destroy the laser diode in the traverse unit (optical pickup). Take care to prevent this when performing repairs.

2. About the earth processing for the destruction prevention by static electricity

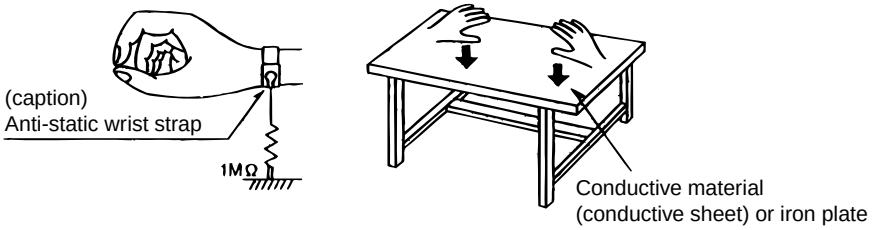
In the equipment which uses optical pick-up (laser diode), optical pick-up is destroyed by the static electricity of the work environment.
Be careful to use proper grounding in the area where repairs are being performed.

2-1 Ground the workbench

Ground the workbench by laying conductive material (such as a conductive sheet) or an iron plate over it before placing the traverse unit (optical pickup) on it.

2-2 Ground yourself

Use an anti-static wrist strap to release any static electricity built up in your body.



3. Handling the optical pickup

1. In order to maintain quality during transport and before installation, both sides of the laser diode on the replacement optical pickup are shorted. After replacement, return the shorted parts to their original condition. (Refer to the text.)

2. Do not use a tester to check the condition of the laser diode in the optical pickup. The tester's internal power source can easily destroy the laser diode.

4. Handling the traverse unit (optical pickup)

1. Do not subject the traverse unit (optical pickup) to strong shocks, as it is a sensitive, complex unit.

2. Cut off the shorted part of the flexible cable using nippers, etc. after replacing the optical pickup. For specific details, refer to the replacement procedure in the text. Remove the anti-static pin when replacing the traverse unit. Be careful not to take too long a time when attaching it to the connector.

3. Handle the flexible cable carefully as it may break when subjected to strong force.

4. It is not possible to adjust the semi-fixed resistor that adjusts the laser power. Do not turn it

Attention when traverse unit is decomposed

***Please refer to "Disassembly method" in the text for pick-up and how to detach the CD traverse mechanism.**

1. Remove the disk stopper and T. bracket on the CD changer mechanism assembly.
2. Disconnect the harness from connector on the CD motor board.
3. CD traverse unit is put up as shown in Fig.1.
4. Solder is put up before the card wire is removed from connector CN601 on the CD servo control board as shown in Fig. 2.
   (When the wire is removed without putting up solder, the CD pick-up assembly might destroy.)
5. Please remove solder after connecting the card wire with CN601 when you install picking up in the substrate.

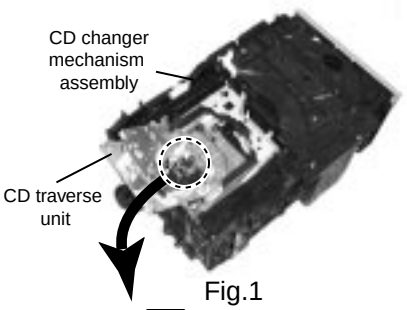


Fig.1

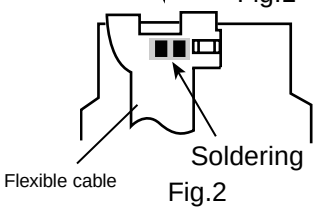
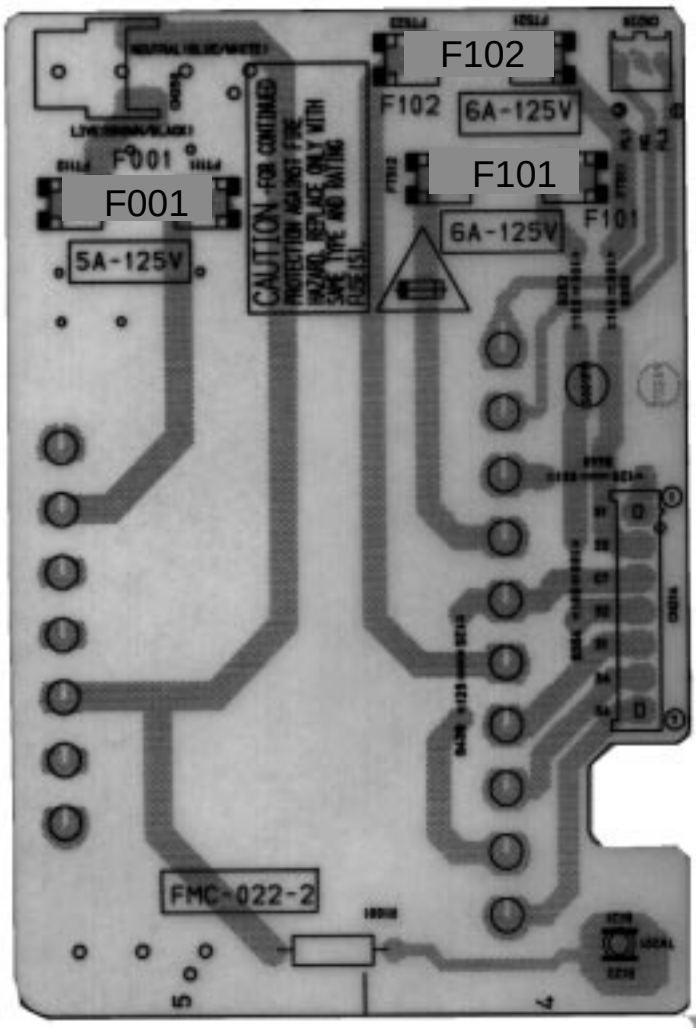
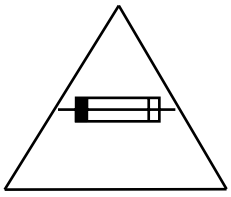


Fig.2

Importance administering point on the safety



For USA and Canada / pour États - Unis d' Amérique et Canada



Caution: For continued protection against risk of fire, replace only with same type 5A/125V for F001, 6A/125V for F101 and F102. This symbol specifies type of fast operating fuse.

Précaution: Pour eviter risques de feux, remplacez le fusible de sureté de F001 comme le meme type que 5A/125V, et 6A/125V pour F101 et F102.
Ce sont des fusibles sûretes qui functionnes rapide.

Disassembly method

<Main body>

■ Removing the metal cover

(See Fig.1 to 3)

1. Remove the six screws **A** on the back of the body.
2. Remove the two screws **B** on both sides of the body.
3. Remove the metal cover from the body by lifting the rear part of the cover.

CAUTION: Do not break the front panel tab fitted to the metal cover.

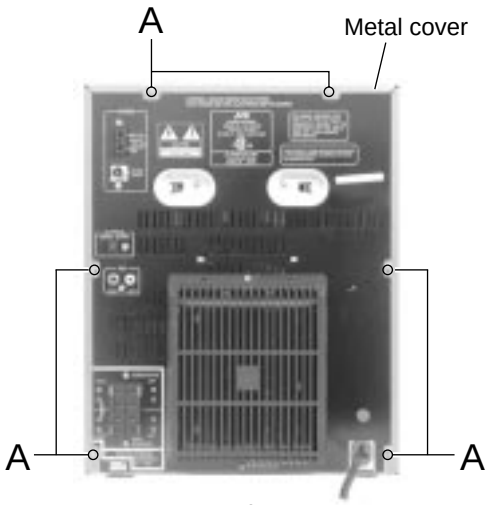


Fig.1

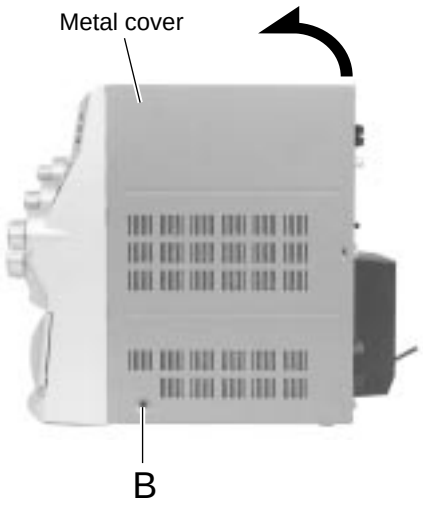


Fig.2

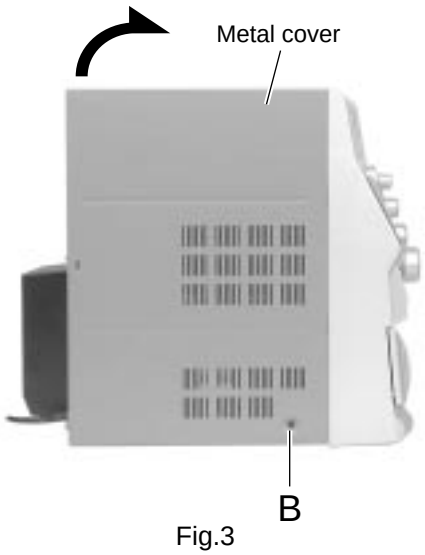


Fig.3

■Removing the CD changer mechanism assembly (See Fig.4 and 5)

・ Prior to performing the following procedure, remove the metal cover.

1. Disconnect the card wire from connector CN661 on the Main board.
2. Remove the two screws **C** on the upper side of the body and the two screws **D** on the back of the rear panel.
3. Remove the plastic rivet attaching the main board.
4. Remove the fan connector CN705.
5. Pull both the rear panel and the front panel assembly to the outside, then remove the CD changer mechanism assembly by lifting the rear part of the assembly.

CAUTION: To prevent damage to the CD fitting, be sure to pull both the rear panel and the front panel assembly enough to remove the CD changer mechanism assembly.

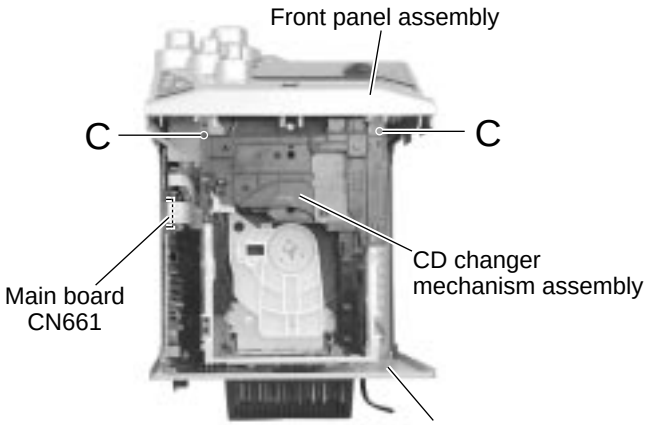


Fig.4

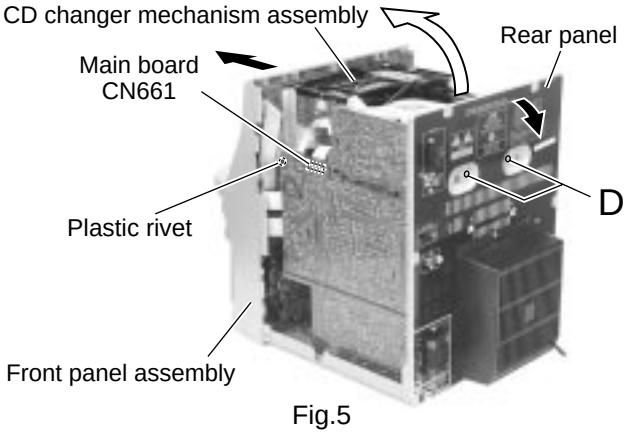


Fig.5

■Removing the front panel assembly (See Fig.6 to 10)

Prior to performing the following procedure, remove the metal cover and CD changer mechanism assembly.

1. Disconnect the card wires from connector CN870, CN871 and CN315 on the main board respectively.
2. Remove the tie band and disconnect the wire from connector CN703 on the amplifier board.
3. Disconnect the wire from connector CN220 on the transformer board.

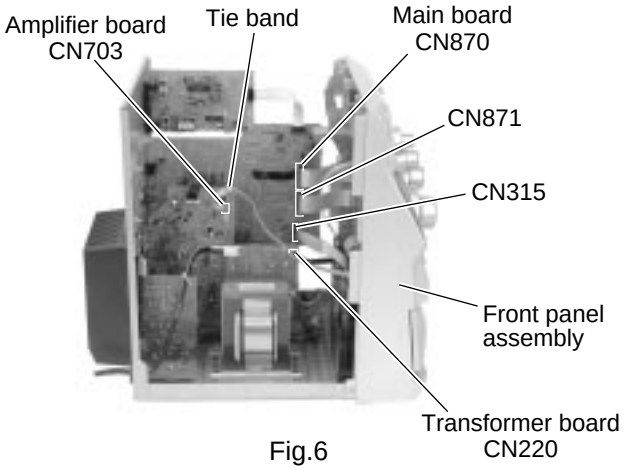


Fig.6

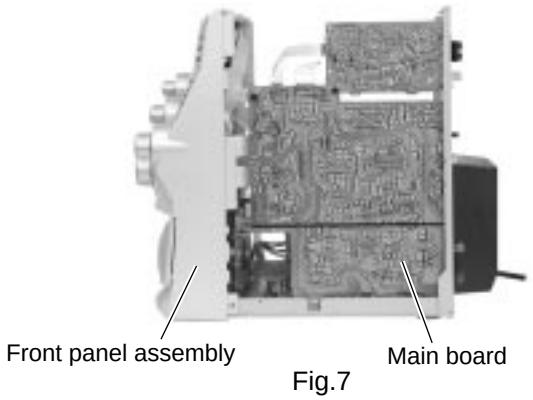


Fig.7

4. Remove the four screws **E** on the bottom of the body.

5. Release the two joints **a** on the lower right and left sides of the body using a screwdriver, and remove the front panel assembly toward the front.

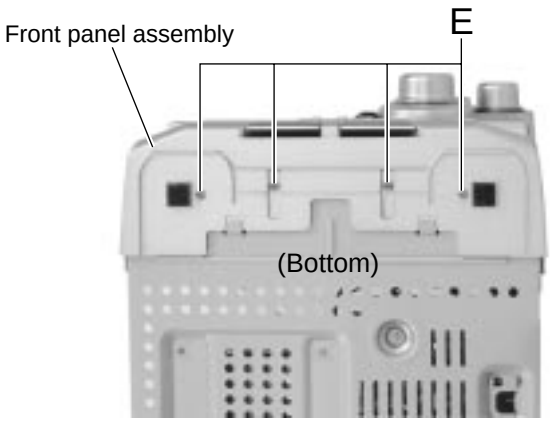


Fig.8

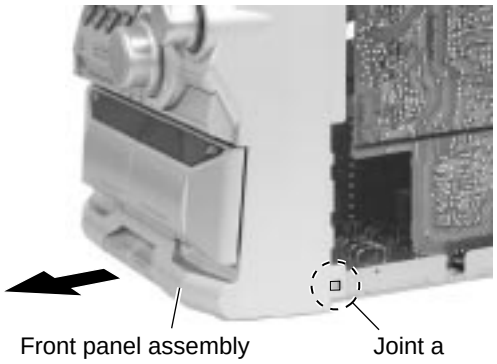


Fig.9

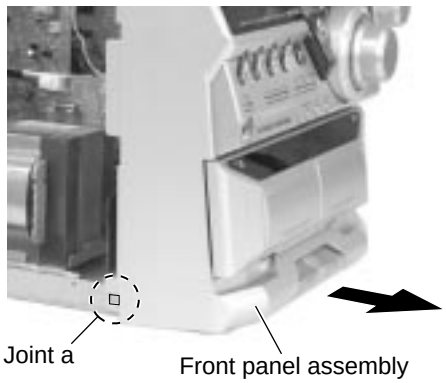


Fig.10

■Removing the tuner board (See Fig.11 and 12)

・ Prior to performing the following procedure, remove the metal cover and the CD changer mechanism assembly.

1. Disconnect the card wire from connector CN1 on the tuner board on the right side of the body.
2. Remove the plastic rivet fixing the tuner board.
3. Remove the two screws **F** on the back of the body.

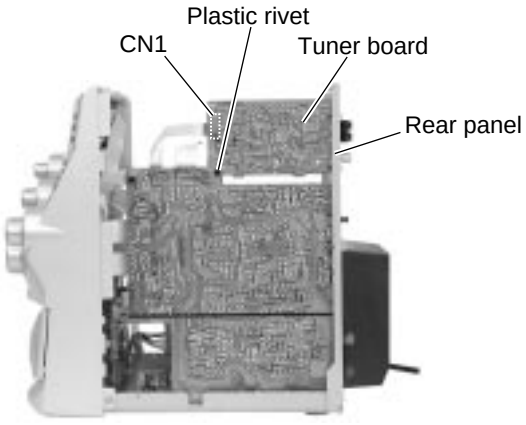


Fig.11

■Removing the rear cover / rear panel (See Fig.12 to 15)

・ Prior to performing the following procedure, remove the metal cover and the CD changer mechanism assembly.

1. Remove the screw **G** attaching the rear cover on the back of the body.
2. Push each tab of the four joints **b** in the direction of the arrow and release.
3. Remove the eleven screws **F** attaching the rear panel.
4. Release the joints **c** on each lower side of the rear panel using a screwdriver and remove the rear panel backward.

Note : Remove the tuner board in case of necessity. (Refer to Fig.21)

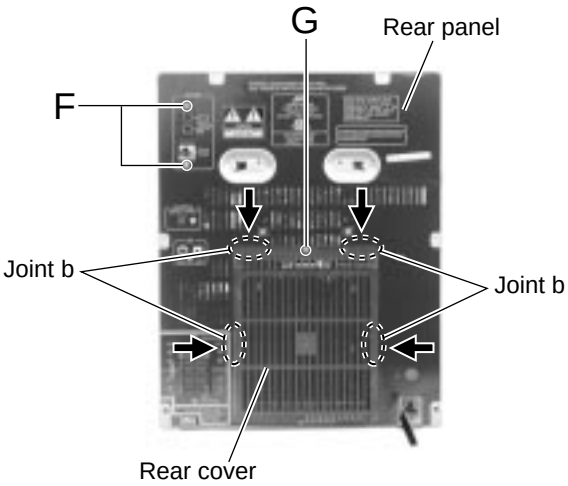


Fig.12

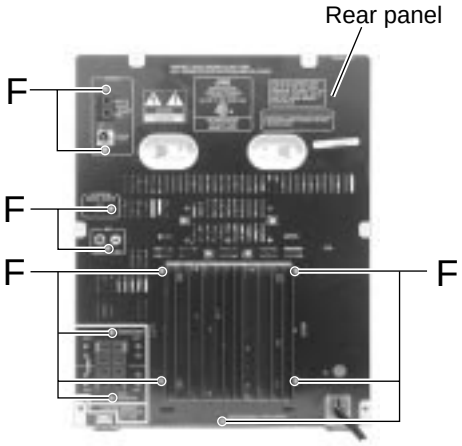


Fig.13

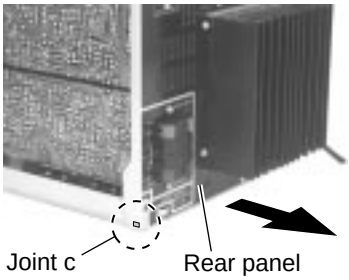


Fig.15

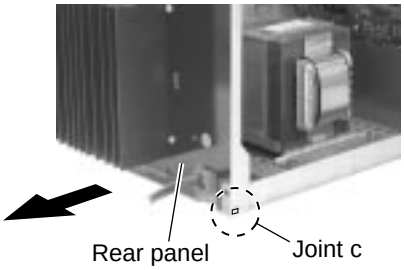


Fig.14

■ Removing the main board

(See Fig.16 and 17)

・ Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly, the rear panel and the tuner board.

1. Disconnect the card wires from connector CN870, CN871 and CN315 on the main board.
2. Disconnect the flat wires from connector CN704 and CN706 on the amplifier board.
3. Remove the screw **H** attaching the main board on the right side of the body.
4. Disconnect connector CN211 and CN212 on the main board from the regulator board.

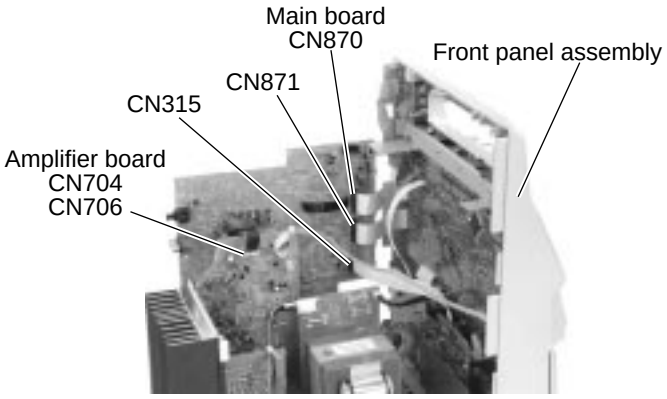


Fig.16

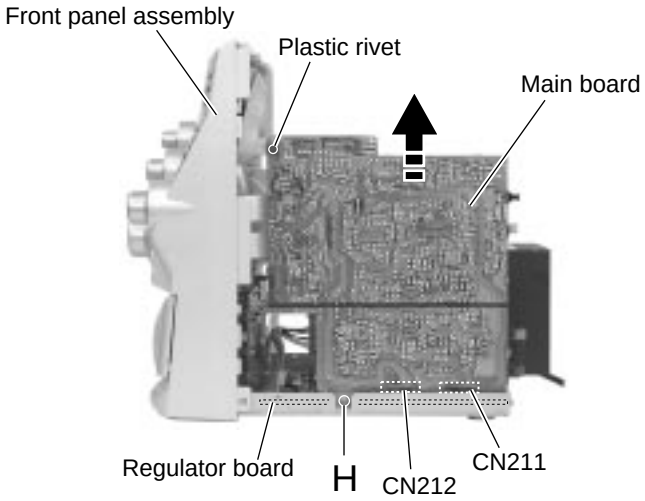


Fig.17

■ Removing the speaker board

(See Fig.18)

・ Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

REFERENCE:	It is not necessary to remove the main board.

1. Disconnect connector CN217 on the speaker board from the regulator board.

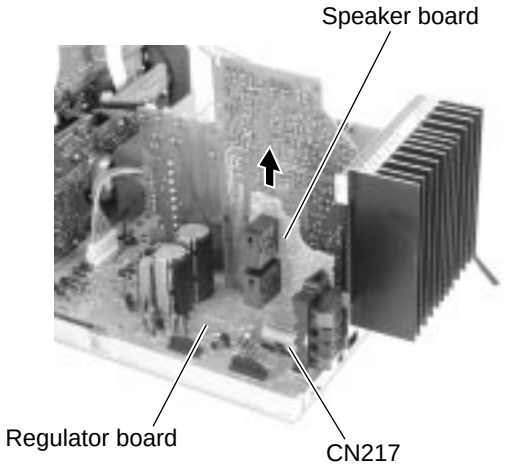


Fig.18

■Removing the amplifier board / voltage board / heat sink (See Fig.19 and 20)

・ Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

1. Disconnect the wires from connector CN703, CN704 and CN706 on the amplifier board respectively.

2. Remove the two tie band attaching the wire to the amplifier board and the voltage board.

3. Disconnect connector CN215 on the amplifier board and CN216 on the voltage board from the regulator board (The heat sink and heat sink bracket will be detached at once).

4. Pull out the upper and lower heat sink brackets from the heat sink respectively.

5. Remove the four screws **I** attaching the amplifier board to the heat sink.

6. Remove the two screws **J**, the board bracket and the voltage board.

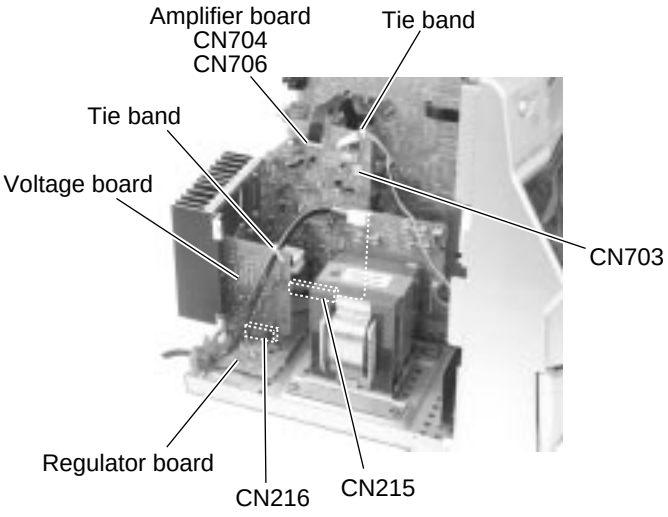


Fig.19

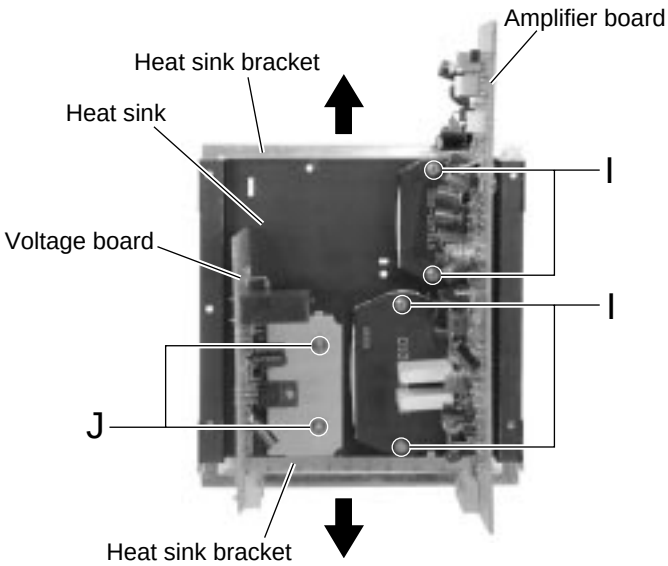


Fig.20

■ Removing the power transformer assembly (See Fig.21 and 22)

・ Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

1. Disconnect the wires from connector CN220 and CN250 on the transformer board.
2. Disconnect the wire from connector CN204 on the regulator board.
3. Remove the four screws **k** attaching the transformer assembly.

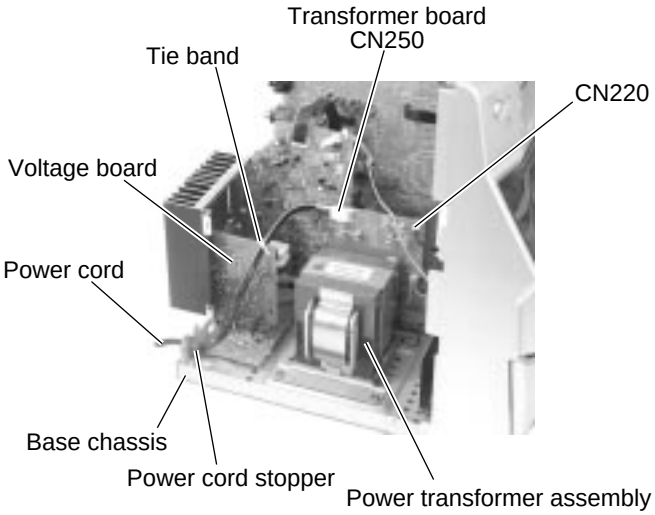


Fig.21

■ Removing the regulator board (See Fig.23)

・ Prior to performing the following procedure, remove metal cover, CD changer mechanism assembly, rear panel, tuner board, main board, amplifier board, voltage board and speaker board.

1. Disconnect the wire from connector CN204 on the regulator board.
2. Remove the two screws **L** attaching the regulator board.

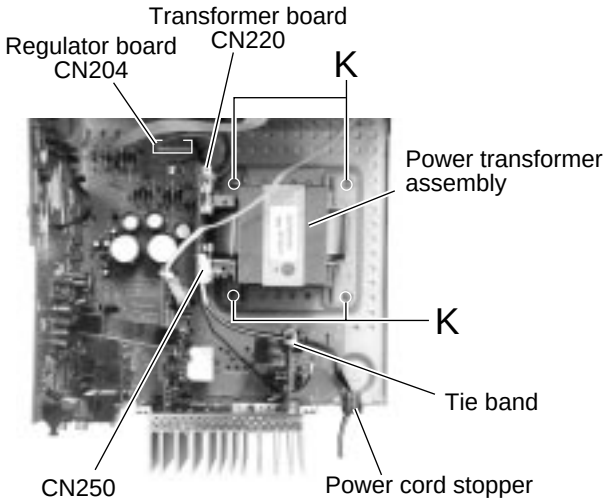


Fig.22

■ Removing the power cord (See Fig.21)

・ Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the rear panel.

1. Disconnect the wire from connector CN250 on the transformer board.
2. Remove the tie band from the voltage board.
3. Move the power cord stopper upward and pull out it from the base chassis.

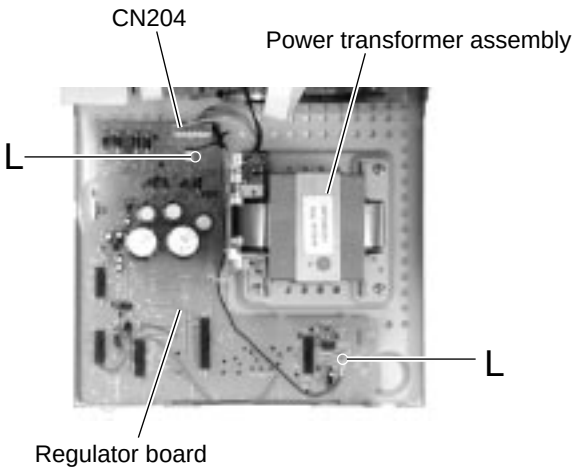


Fig.23

<Front panel assembly>

- Prior to performing the following procedure, remove the metal cover, the CD changer mechanism assembly and the front panel assembly.

■Removing the cassette mechanism assembly (See Fig.24)

1. Disconnect the card wire from connector CN306 on the head amplifier & mechanism control board.
2. Remove the four screws M and three screws M' attaching the cassette mechanism assembly.

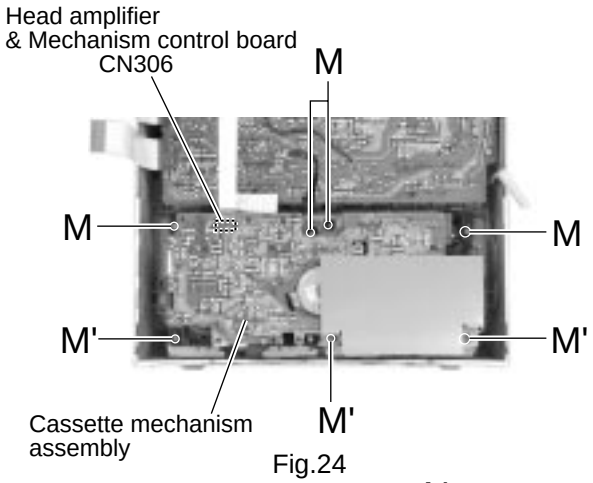


Fig.24

■Removing the display system control board (See Fig.25 to 27)

1. Remove the five screws **N** attaching the stay bracket.
2. Disconnect the card wires from connector CN316 and CN880 on the display system control board.
3. Remove the seven screws **O** attaching the display system control board.
4. If necessary, disconnect the wire from connector CN911 on the front side of the display system control board and unsolder FW915.

   If necessary, remove the CD play board. (Fig. 28)

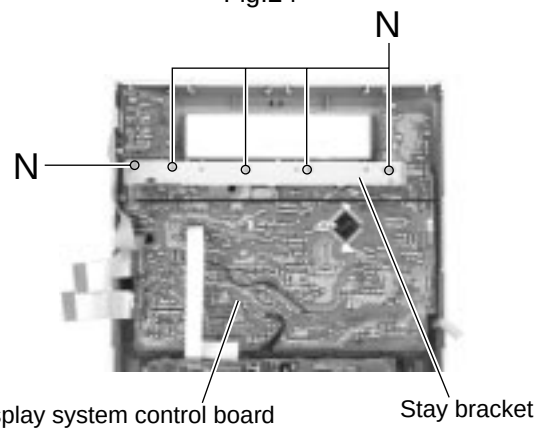


Fig.25

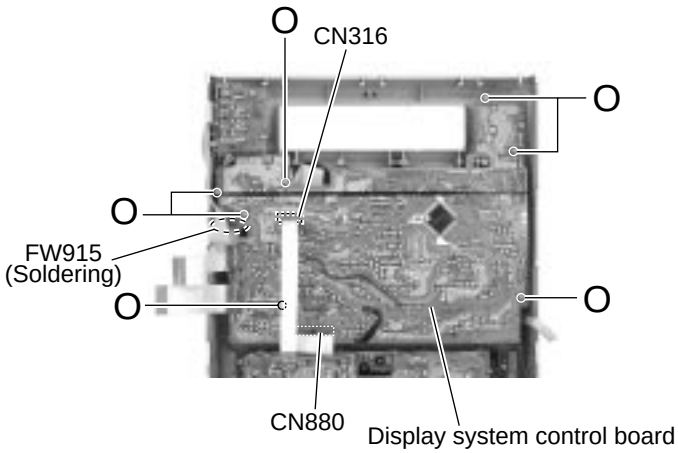


Fig.26

■Removing the CD play board (See Fig.27 and 28)

1. Remove the three screws **P** attaching the CD eject board.
2. If necessary, unsolder FW915 on the CD eject board.

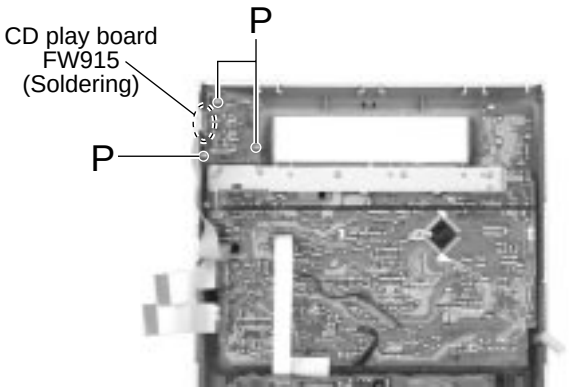


Fig.28

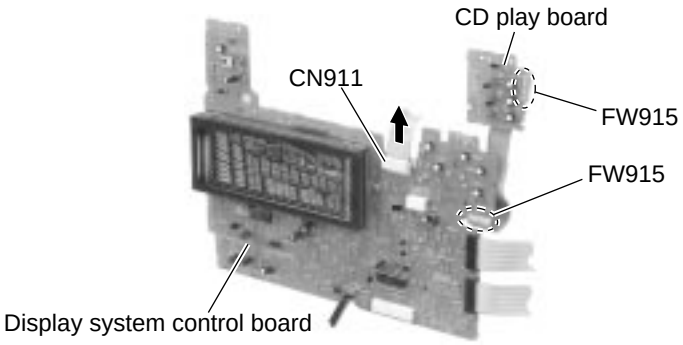


Fig.27

■ Removing the preset / tuning switch board (See Fig.29 and 30)

・ Prior to performing the following procedure, remove the display system control board.

1. Pull out the preset knob on the front panel.

2. Remove the five screws **Q** attaching the preset / tuning switch board.

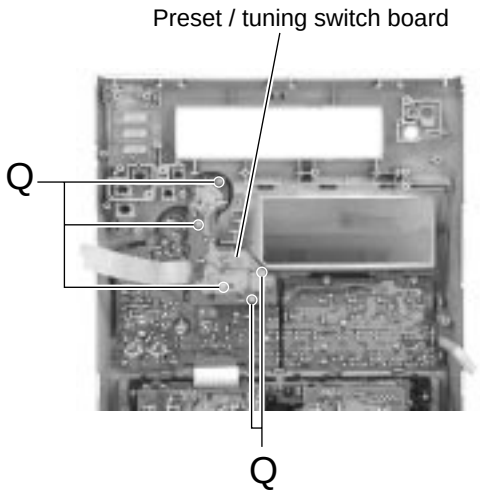


Fig.29

■ Removing the operation switch board (See Fig.30 and 31)

・ Prior to performing the following procedure, remove the display system control board and the preset / tuning switch board.

1. Pull out the volume knob on the front panel and remove the nut. Pull out the surround mode knob and the surround woofer level knob toward the front.

2. Remove the twelve screws **R** attaching the operation switch board.

3. Release the wire clamp.

4. Remove the screw **R'** attaching the earth terminal extending from the switch board.

   Release each tab of the seven joints **g** retaining the operation switch board.

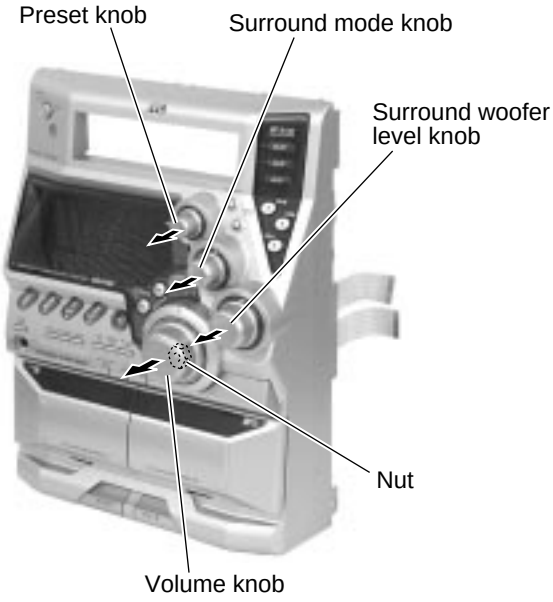


Fig.30

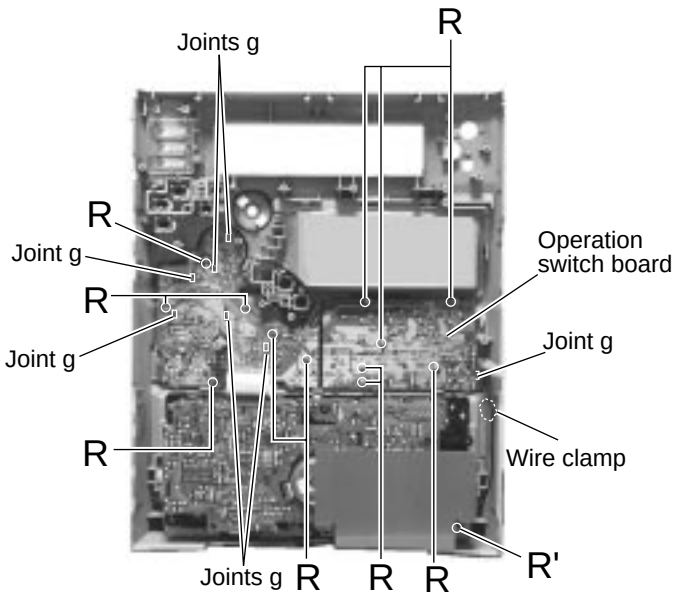


Fig.31

≪CD Changer Mechanism Type:VC3 Section≫

■ Removing the CD Servo control board (See Fig.1)

1.Remove the metal cover.
2.Remove the CD changer mechanism assembly.
3.From bottom side the CD changer mechanism assembly, remove the four screws **A** retaining the CD servo control board.
4.Absorb the four soldered positions "a" of the right and left motors with a soldering absorber.
5.Pull out the earth wire on the CD changer mechanism assembly.
6.Disconnect the connector CN854 on the CD servo control board.
7.Disconnect the card wire CN601 and the connector CN801 on the CD servo control board.

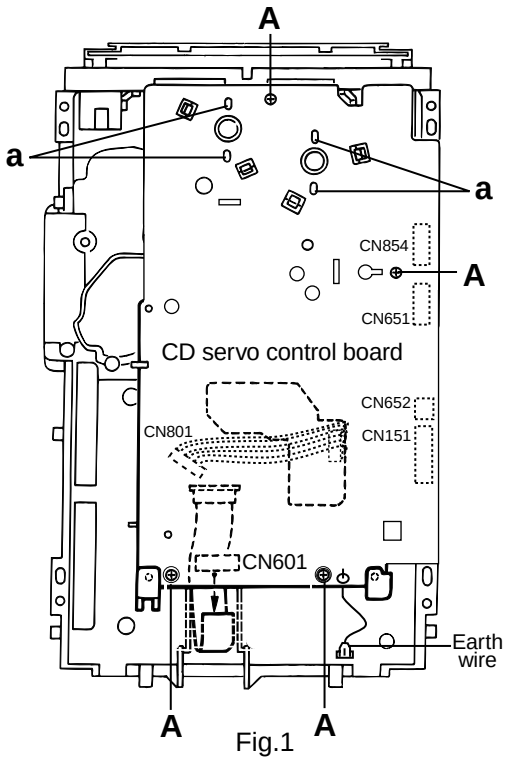


Fig.1

■ Removing the CD tray assembly (See Fig.2~4)

1. Remove the front panel assembly.
2. Remove the CD changer mechanism assembly.
3. Remove the CD Servo control board.
4. Remove the screw **B'** retaining the lod stopper.
5. From the T.bracket section "b" and clamper base section "c" , remove both of the edges fixing the rod(See Fig.2 and 3).
6. Remove the screw B retaining the disc stopper (See Fig.3).
7. Remove the three screws **C** retaining the T.bracket (See Fig.3).
8. Remove the screw **D** retaining the clamper assembly (See Fig.3).
9. From the left side face of the chassis assembly, remove the one screw **E** retaining both of the return spring and lock lever(See Fig. 4).
10. By removing the pawl at the section "d" fixing the return spring, dismount the return spring(See Fig.4).
11. Remove the three lock levers(See Fig.4).

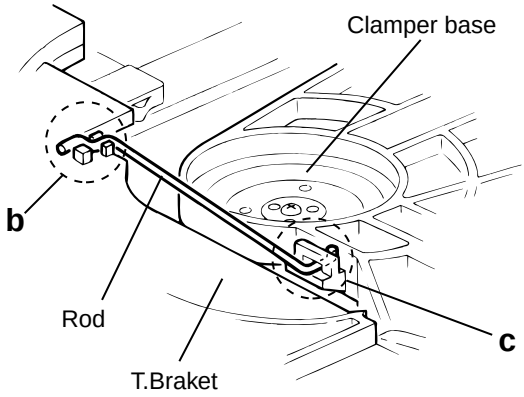


Fig.2

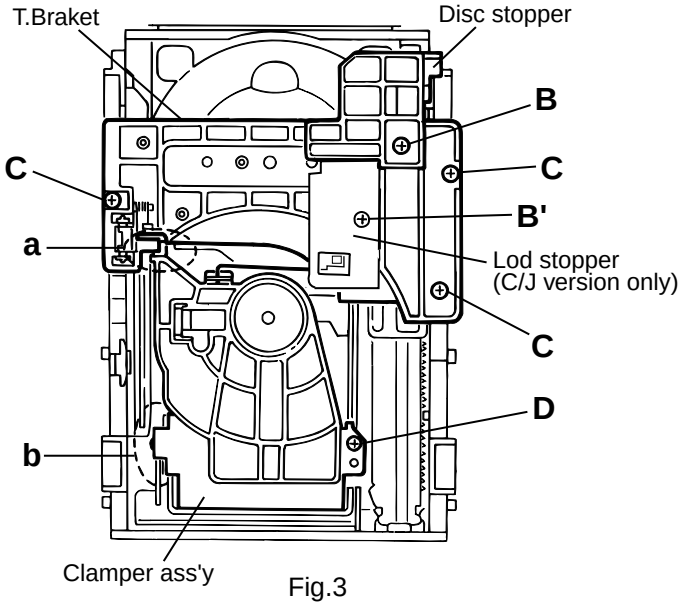


Fig.3

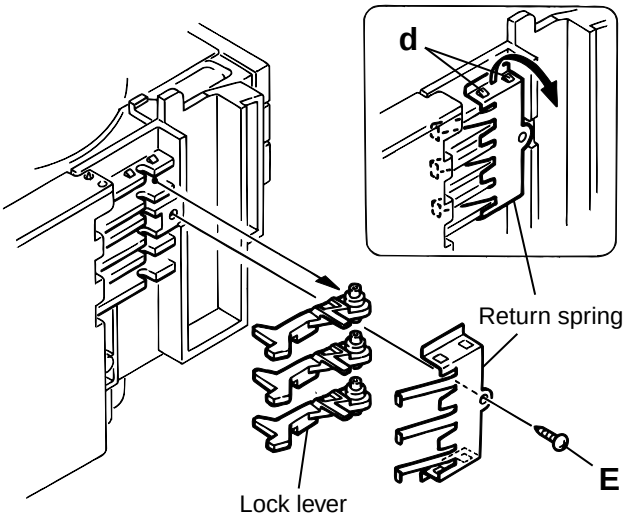


Fig.4

11. Check whether the lifter unit stopper has been caught into the hole at the section "e" of CD tray assembly as shown in Fig.5.
12. Make sure that the driver unit elevator is positioned as shown in Fig.6 from to the second or fifth hole on the left side face of the CD changer mechanism assembly.

[Caution] In case the driver unit elevator is not at above position, set the elevator to the position as shown in Fig.7 by manually turning the pulley gear as shown in Fig.8.

13. Manually turn the motor pulley in the clockwise direction until the lifter unit stopper is lowered from the section "e" of CD tray assembly(See Fig.8).
14. Pull out all of the three stages of CD tray assembly in the arrow direction "f" until these stages stop (See Fig.6).
15. At the position where the CD tray assembly has stopped, pull out the CD tray assembly while pressing the two pawls "g and g' " on the back side of CD tray assembly(See Fig.9). In this case, it is easy to pull out the assembly when it is pulled out first from the stage CD tray assembly.

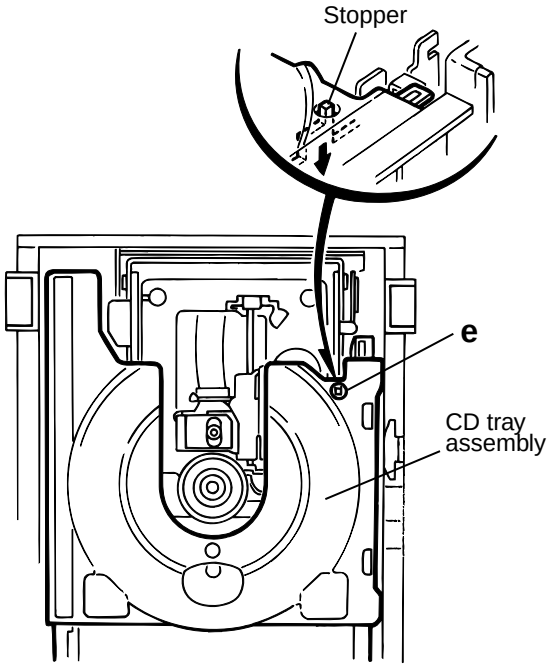


Fig.5

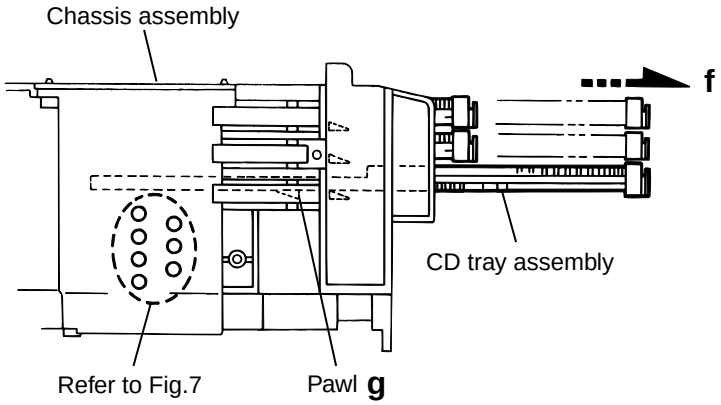


Fig.6

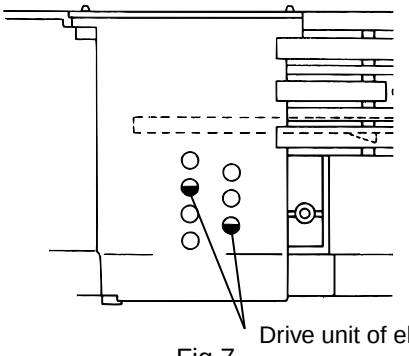


Fig.7

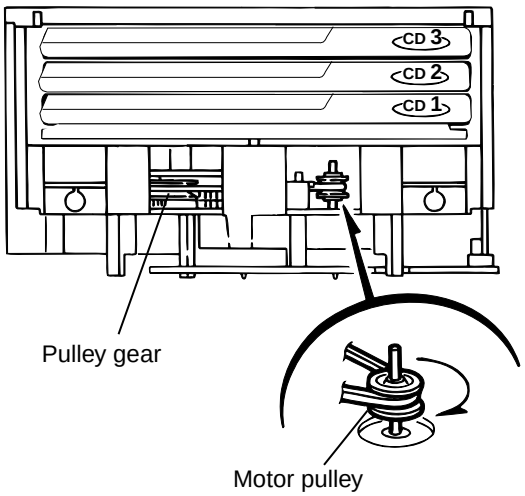


Fig.8

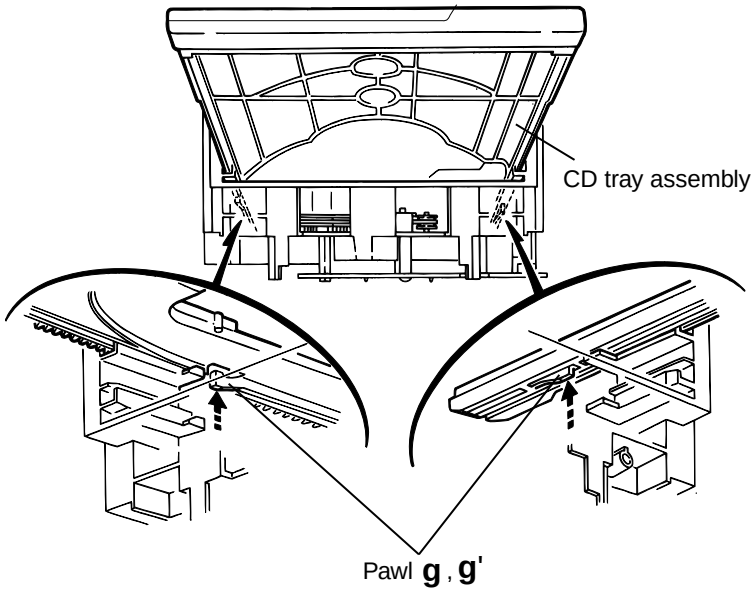


Fig.9

■ Removing the CD loading mechanism assembly(See Fig.10)

1. While turning the cams R1 and R2 assembly in the arrow direction "h" ,align the shaft "i" of the CD loading mechanism assembly to the position shown in Fig.10.
2. Remove the four screws **F** retaining the CD loading mechanism assembly.

■ Removing the CD traverse mechanism (See Fig.11 and 12)

1. For dismounting only the CD traverse mechanism without removing the CD loading mechanism assembly, align the shaft "**j**" of the CD loading mechanism assembly to the position shown Fig.11 while turning the cam R1 and R2 assembly in the arrow direction "**k**" .
2. By raising the CD loading mechanism assembly in the arrow direction "**l**", remove the assembly from the lifter unit

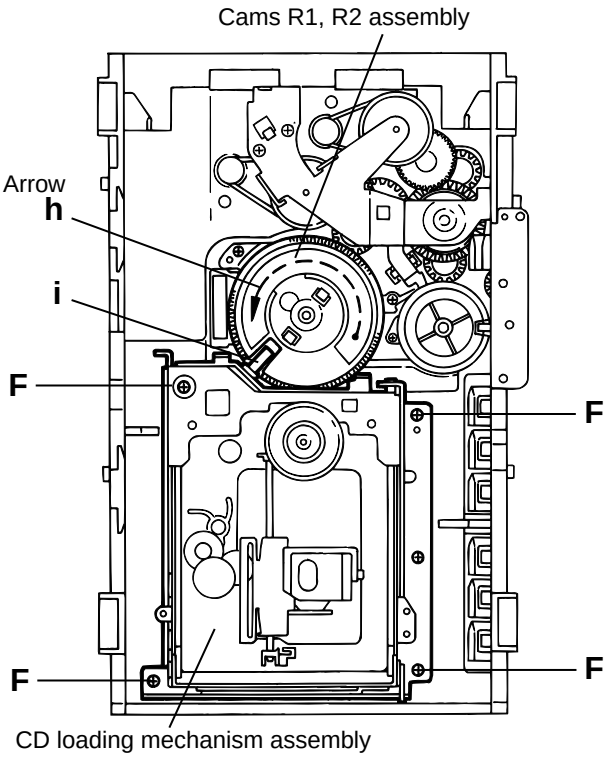


Fig.10

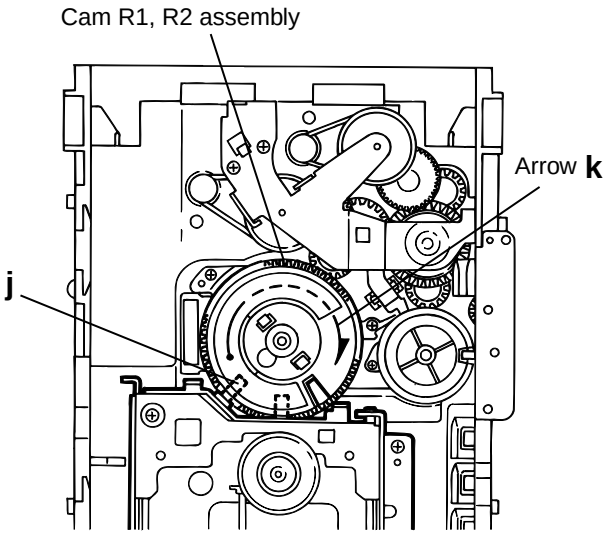


Fig.11

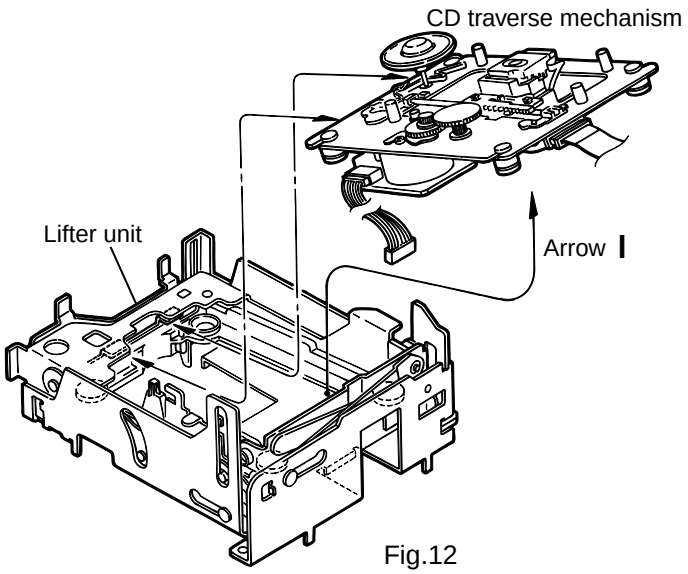


Fig.12

■ Removing the CD pick unit (See Fig.13)

1. Move the cam gear in the arrow direction "**m**" . Then, the CD pickup unit will be moved in the arrow direction "**n**" .
2. According to the above step, shift the CD pickup unit to the center position.
3. While pressing the stopper retaining the shaft in the arrow direction "**o**" , pull out the shaft in the arrow direction "**p**".
4. After dismounting the shaft from the CD pickup unit, remove the CD pickup unit

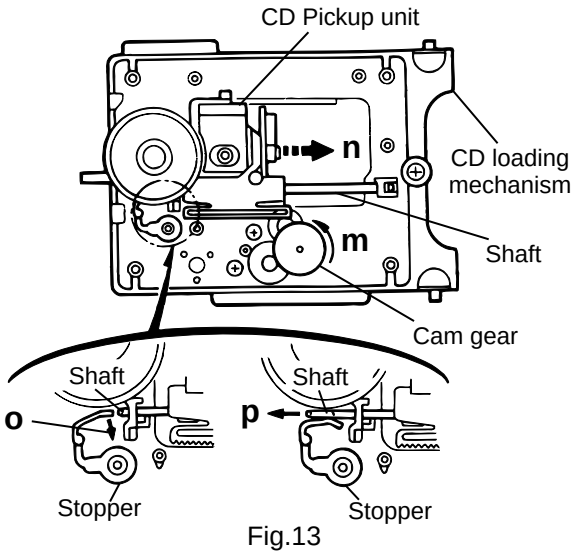


Fig.13

■ Removing the try select switch board (See Fig.14)

1. Remove the two screws G retaining the tray select switch board.
2. Disconnect the tray select switch board from connector CN804 on the CD servo control board.

■ Removing the cam unit (See Fig.15 ~17)

1. Remove the CD loading mechanism assembly.
2. While turning the cam gear "**q**", align the Paul "**r**" position of the drive unit to the notch position(Fig.16) on the cam gear "**q**".
3. Pull out the drive unit and cylinder gear(See Fig.17).
4. While turning the cam gear "**q**", align the Paul "**s**" position of the select lever to the notch position(Fig.18) on the cam gear "**q**".
5. Remove the four screws **H** retaining the cam unit(cam gear "q" and cams R1/R2 assembly)(See Fig.18).

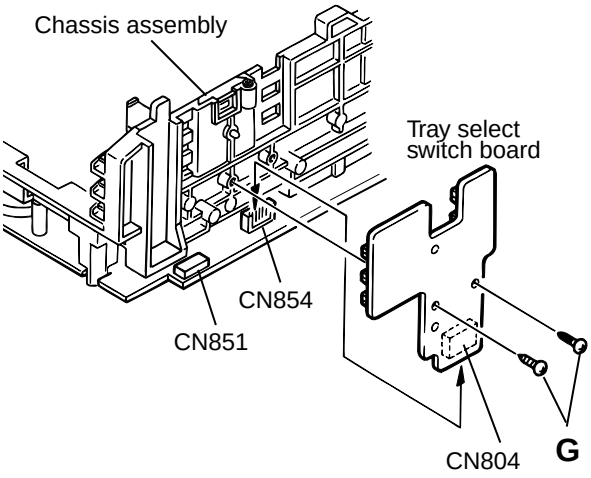


Fig.14

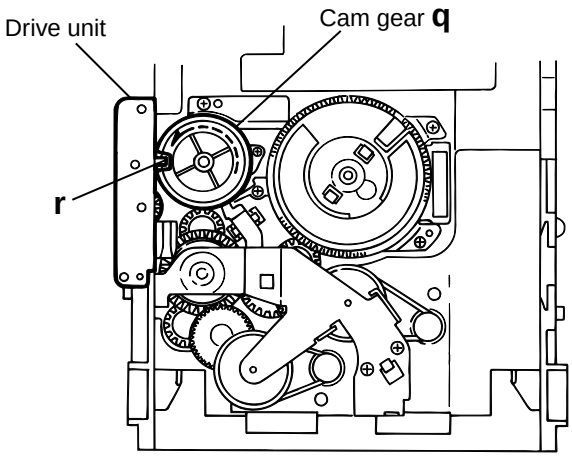


Fig.15

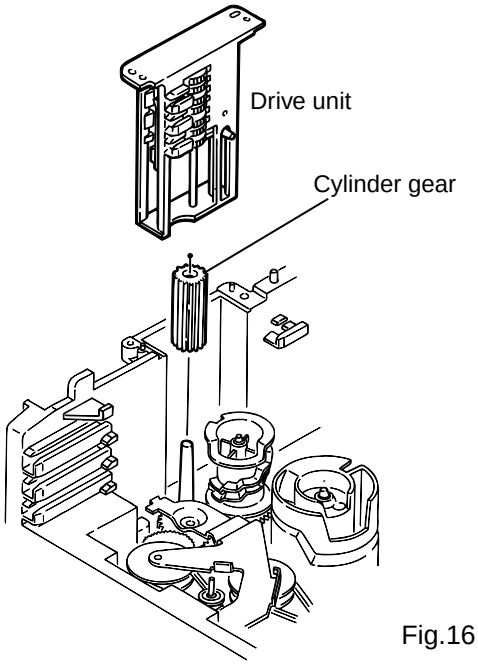


Fig.16

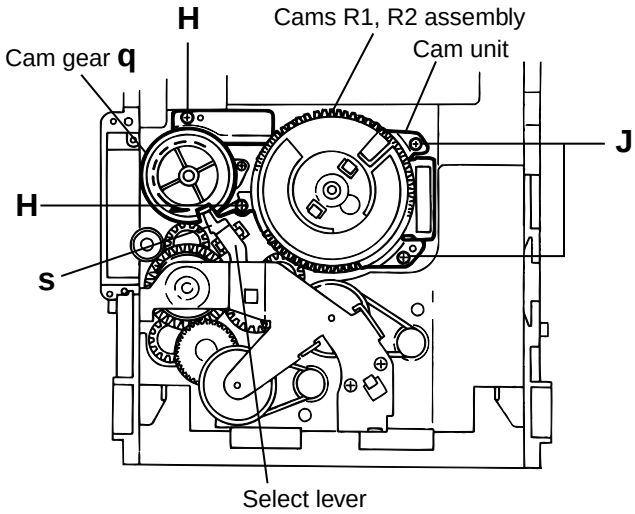


Fig.17

■ Removing the actuator motor and belt (See Fig.18~21)

1. Remove the two screws **l** retaining the gear bracket (See Fig.18).
2. While pressing the pawl "**t**" fixing the gear bracket in the arrow direction, remove the gear bracket (See Fig.18).
3. From the notch "**u** section" on the chassis assembly fixing the edge of gear bracket, remove and take out the gear bracket(See Fig. 19).
4. Remove the belts respectively from the right and left actuator motor pulleys and pulley gears(See Fig. 18).
5. After turning over the chassis assembly, remove the actuator motor while spreading the four pawls "**v**" fixing the right and left actuator motors in the arrow direction(See Fig. 20).

[Note] When the chassis assembly is turned over under the conditions wherein the gear bracket and belt have been removed, then the pulley gear as well as the gear, etc. constituting the gear unit can possibly be separated to pieces. In such a case, assemble these parts by referring to the assembly and configuration diagram in Fig. 21.

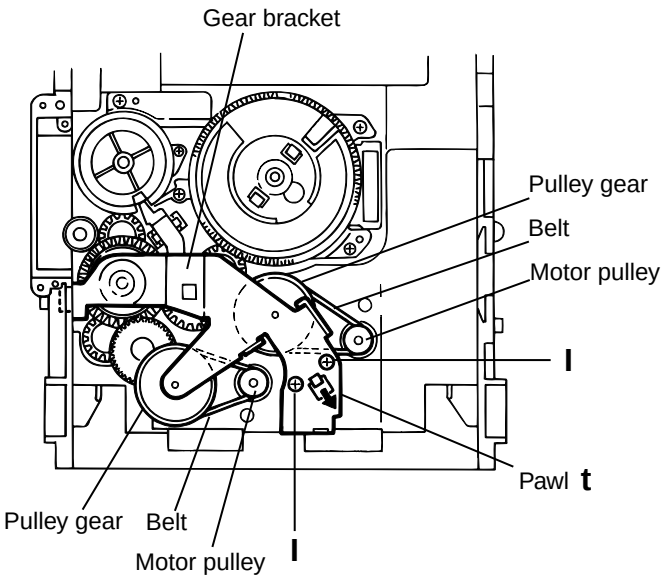


Fig.18

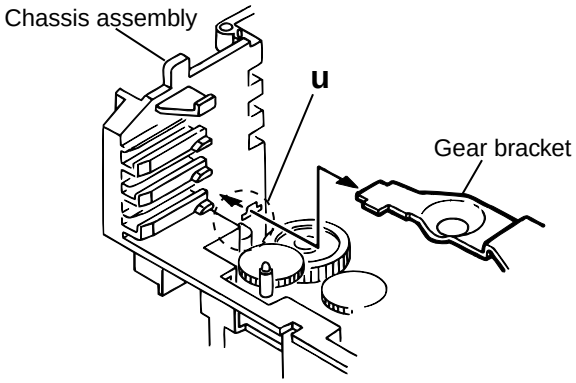


Fig.19

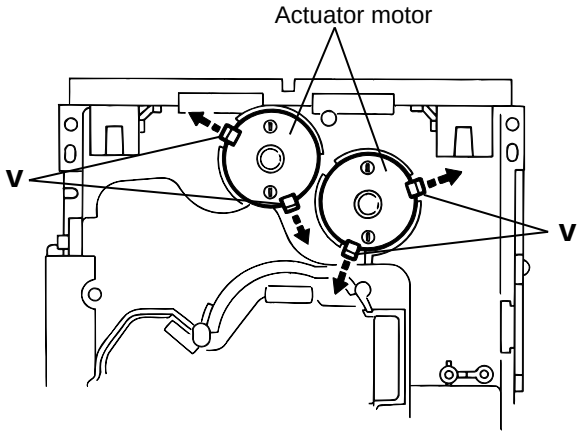


Fig.20

Assembly and Configuration Diagram

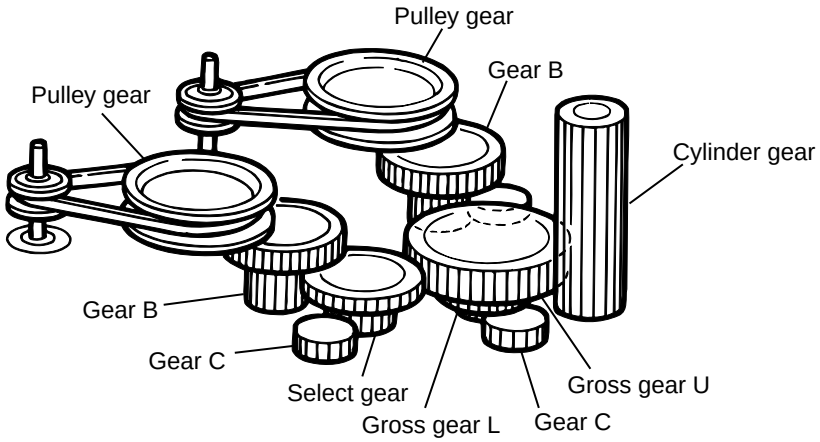


Fig.21

■ Removing the cams R1/R2 assembly and cam gear q(See Fig.22)

1. Remove the slit washer fixing the cams R1 and R2 assembly.
2. By removing the two pawls "**w**" fixing the cam R1, separate R2 from R1.
3. Remove the slit washer fixing the cam gear "**q**".
4. Pull out the cam gear "**q**" from the C.G. base assembly.

■ Removing the C.G. base assembly (See Fig.22 and 23)

Remove the three screws **J** retaining the C.G. base assembly.

[Caution] To reassemble the cylinder gear, etc.with the cam unit (cam gear and cans R1/R2 assembly), gear unit and drive unit, align the position of the pawl "**x**" on the drive unit to that of the notch on the cam gear "**q**". Then, make sure that the gear unit is engaged by turning the cam gear "**q**" (See Fig. 24).

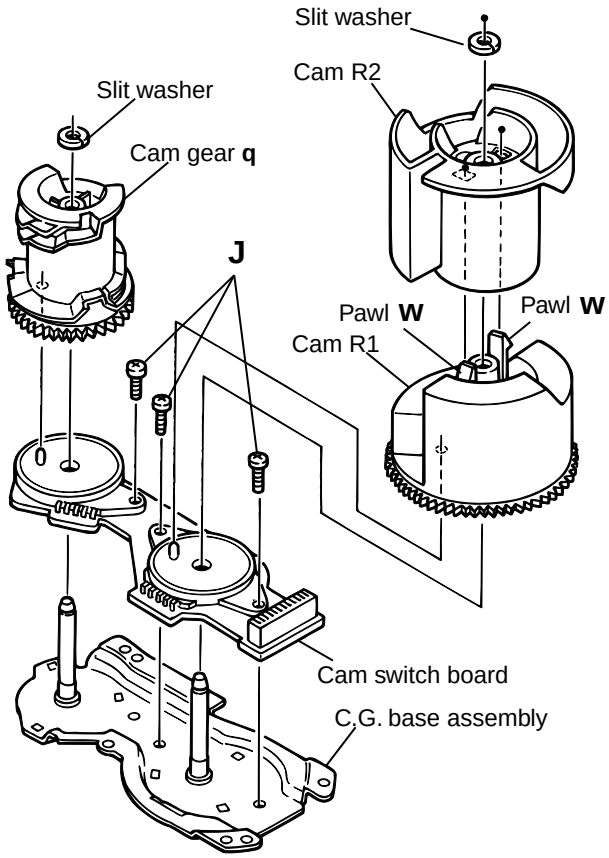


Fig.22

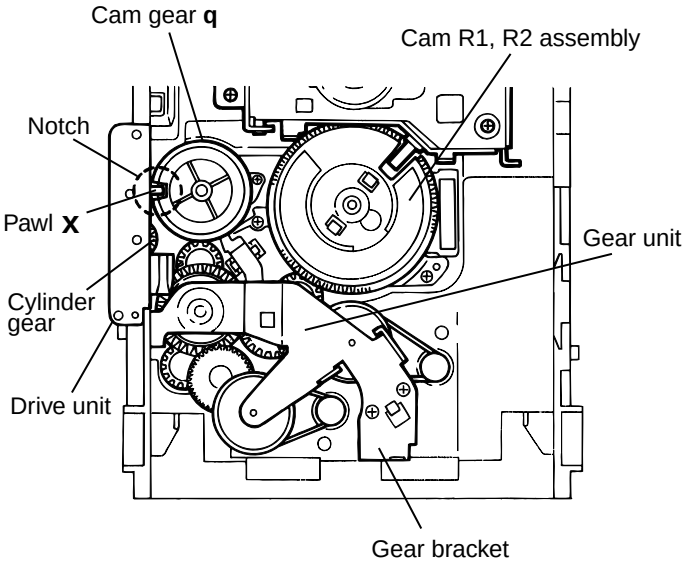


Fig.23

< Cassette mechanism section >

■ Removing the playback,recording and eraser heads (See Fig.1~3)

1. While shifting the trigger arms seen on the right side of the head mount in the arrow direction,turn the flywheel R in counterclockwise direction until the head mount has gone out with a click (See Fig. 1).
2. When the flywheel R is rotated in counterclockwise direction, the playback / recording & eraser head will be turned in counterclockwise direction from the position in Fig.2 to that in Fig.3.
3. At this position, disconnect the flexible P.C.board (outgoing from the playback head) from the connector CN301 on the head amp. and mechanism control P.C. board.
4. Remove the flexible P.C.board from the chassis base.
5. Remove the spring "a" from behind the playback / recording head.
6. Loosen the reversing azimuth screw retaining the playback head.
7. Take out the playback head from the front of the head mount.
8. The recording and eraser heads should also be removed similarly according to Steps 1~7 above.

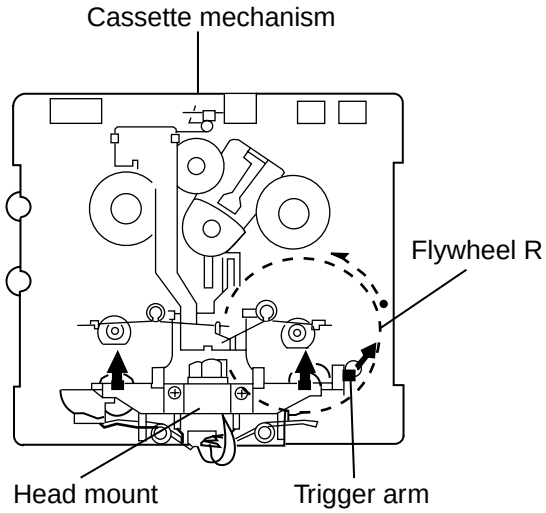


Fig.1 (Mechanism A side)

● Reassembling the playback, recording and eraser heads (See Fig.3)

1. Reassemble the playback head from the front of the head mount to the position as shown in Fig.3.
2. Fix the reversing azimuth screw.
3. Set the spring a from behind the playback head.
4. Attach the flexible P.C.board to the chassis base as shown in Fig.3.
5. The recording and eraser heads should also be reassembled similarly according to Steps 1~4 above.

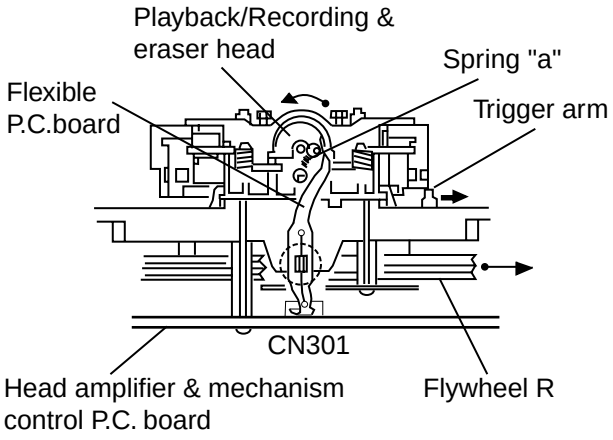


Fig.2 (Mechanism A side)

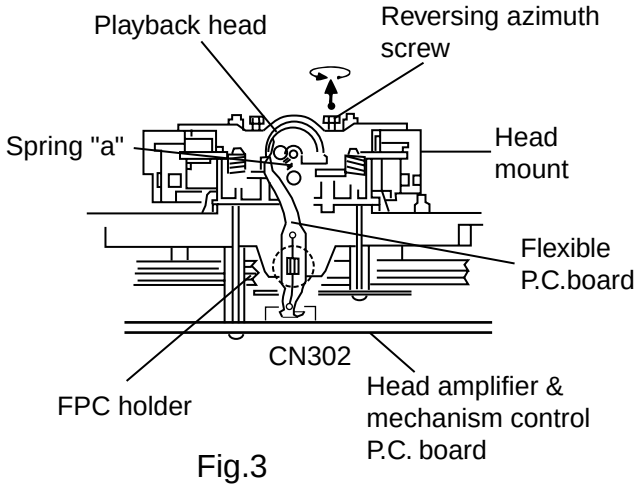


Fig.3 (Mechanism B side)

■ Removing the head amp. and mechanism control board (See Fig. 4)

1.Remove the cassette mechanism assembly.
2.After turning over the cassette mechanism assembly,remove the five screws "A" retaining the head amplifier & mechanism control board.
3.Disconnect the connectors CN303 on the board and the connectors CN301 and on CN302 both the right and left side reel pulse boards.
4.When necessary, remove the 4pin parallel wire soldered to the main motor

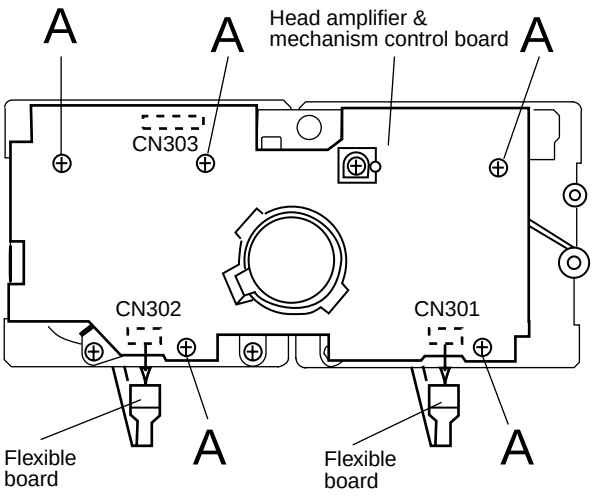


Fig.4

■ Removing the capstan motor assembly

(See Fig.5 to 7)

1.Remove the six screws "B" retaining capstan motor assembly (See Fig. 5).
2.While raising the capstan motor, remove the capstan belts A and B respectively from the motor pulley (See Fig. 6).

Caution 1: Be sure to handle the capstan belts so carefully that these belts will not be stained by grease and other foreign matter. Moreover, these belts should be hand while referring to the capstan belt hanging method.(See Fig.6 and 7)

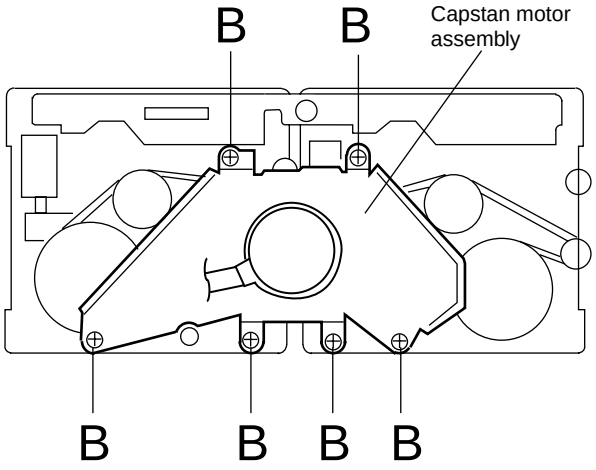


Fig.5

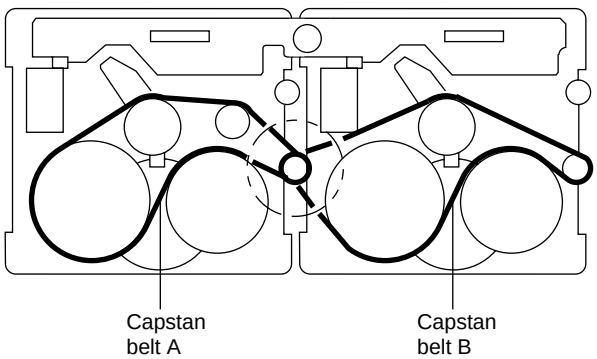


Fig.7

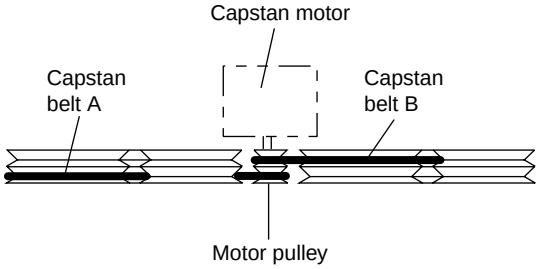


Fig.6

■ Removing the capstan motor (See Fig. 8)

From the joint bracket, remove the two screws "C" retaining the capstan motor.

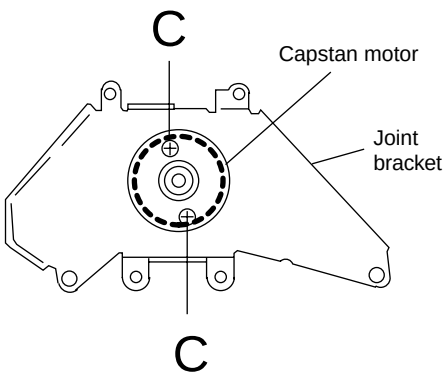


Fig.8

■ Removing the flywheel (See Fig. 9,10)

1.Remove the head amp. and mechanism control P.C.Board.
2.Remove the capstan motor assembly.
3.After turning over the cassette mechanism, remove the two slit washers "a" & "b" fixing the capstan shafts R and L, and pull out the flywheels R and L respectively from behind the cassette mechanism.

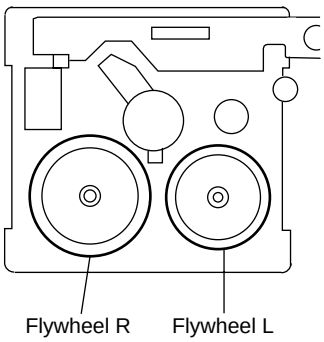


Fig.10

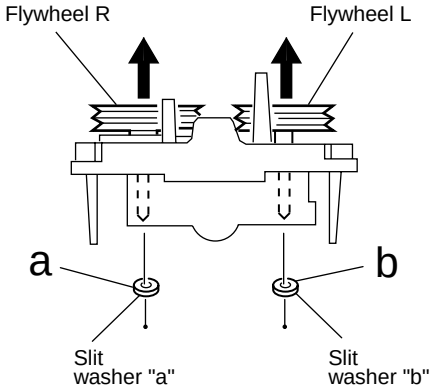


Fig.9

■ Removing the reel pulse board and solenoid (See Fig. 11)

1.Remove the five pawls (c,d,e,f,g) retaining the reel pulse P.C.Board.
2.From the surface of the reel pulse P.C.Board parts, remove the two pawls "h" and "i" retaining the solenoid.

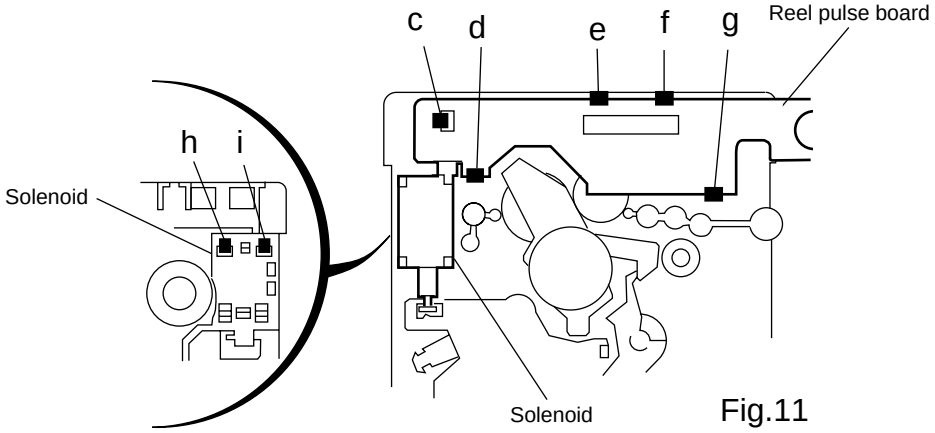


Fig.11

< Speaker section >

Attention which adheres to speaker box

The speaker box of this model is a unit supply.
Therefore, we do not supply it as individual parts though the method of disassembling the speaker box has been described.

■ Removing the side cover (See Fig.1)

1. Remove the six screws **A** on the side of the body.

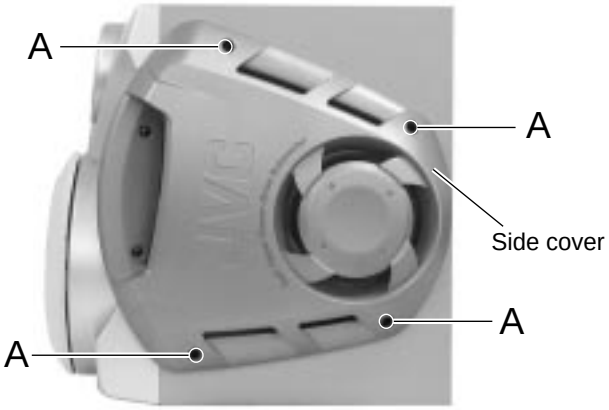


Fig.1

■ Removing the squawker speaker (See Fig.2)

- Prior to performing the following procedure, remove the side cover.

1. Remove the four screws **B** on the side of the body.
2. Disconnect the red and black wires from the speaker terminals on the squawker speaker.

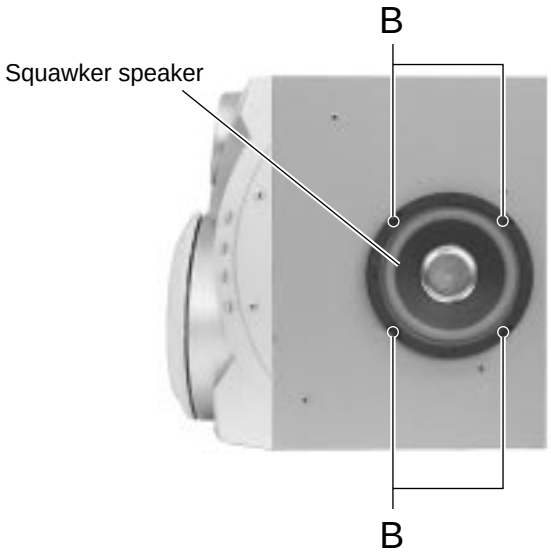


Fig.2

■ Removing the front cover (See Fig.3 to 6)

- Prior to performing the following procedure, remove the side cover.

1. Pull out the saran net toward the front while disengaging the four joints **a**.
2. Remove the two screw cover and two screws **C** attaching the inner front cover.

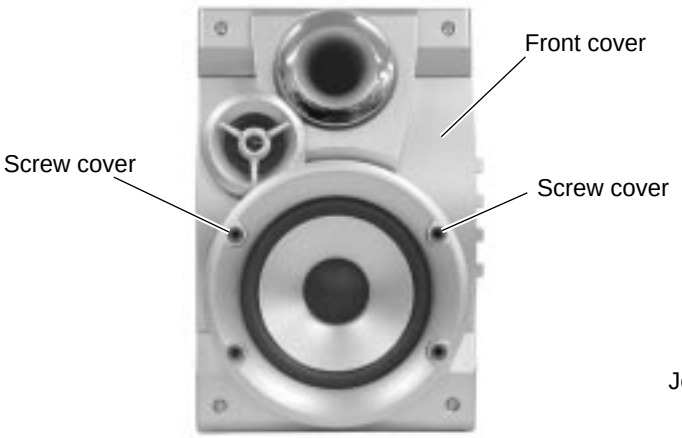


Fig.4

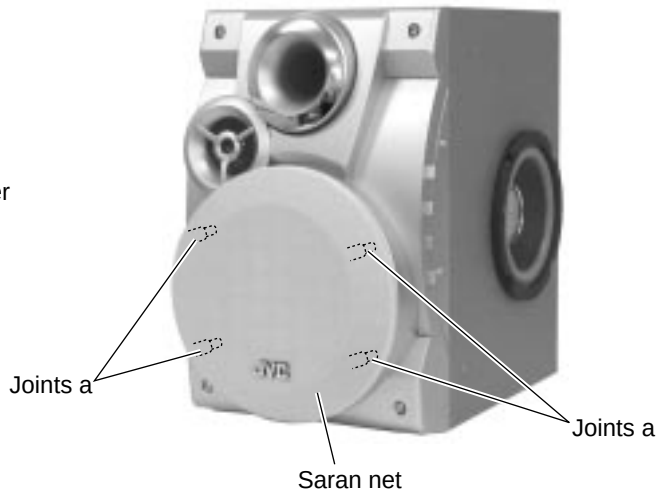


Fig.3

3. Remove the two screws **D** and **E** respectively.

4. Remove the front cover toward the front and disconnect the yellow and black wires from the two tweeter speaker terminals.

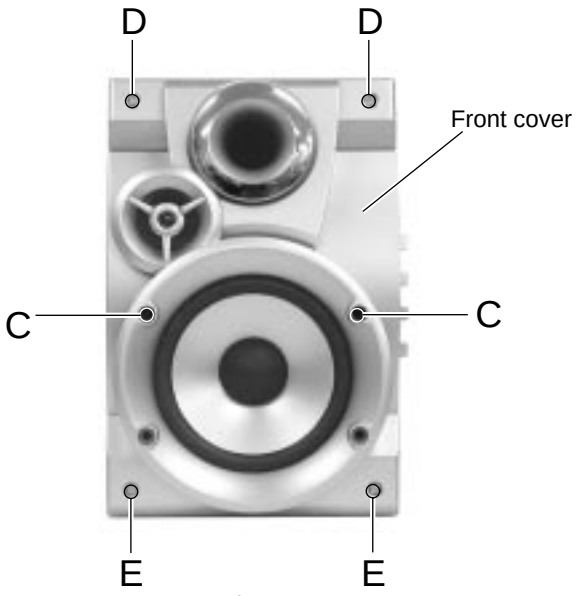


Fig.5

■Removing the woofer speaker (See Fig.7)

・ Prior to performing the following procedure, remove the side cover and the front cover.

1. Remove the four screws **F** on the front of the body.

2. Pull out the woofer speaker toward the front and disconnect the wire (yellow and black,blue and black) from the two speaker terminals.

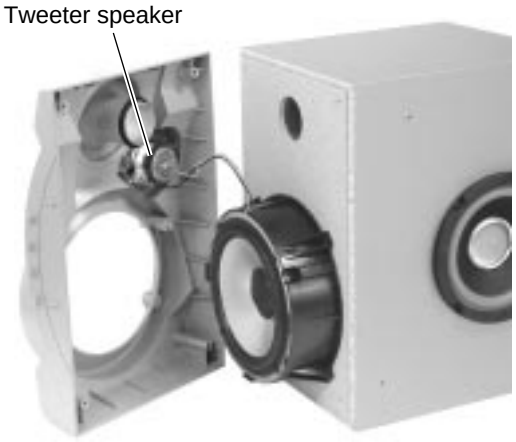


Fig.6

■Removing the tweeter speaker (See Fig.8)

・ Prior to performing the following procedure, remove the side cover and the front cover.

1. Remove the two screws **G** attaching the tweeter speaker on the back of the front cover.

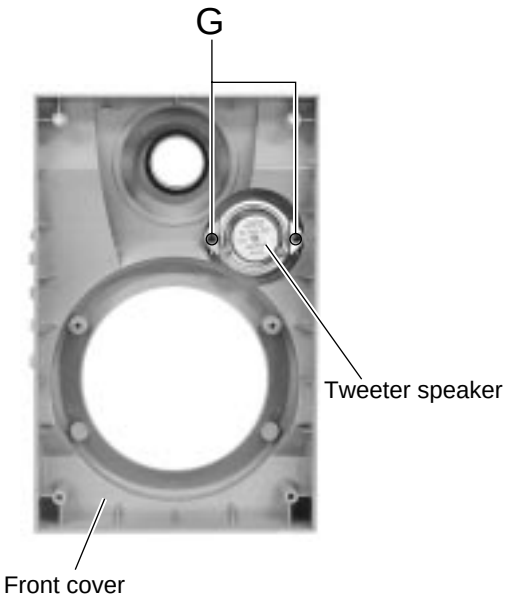


Fig.8

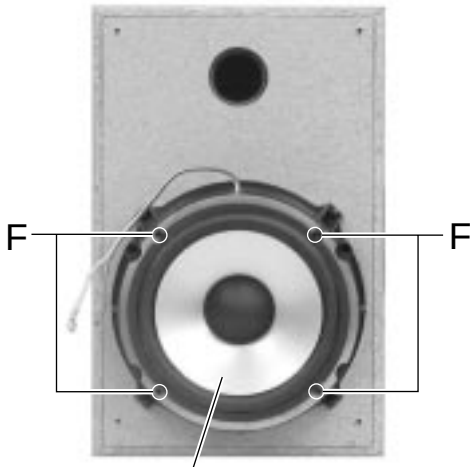


Fig.7

Adjustment method

Measurement instruments required for adjustment

1. Low frequency oscillator,
   This oscillator should have a capacity to output 0dBs to 600ohm at an oscillation frequency of 50Hz-20kHz.
2. Attenuator impedance : 600ohm
3. Electronic voltmeter
4. Frequency counter
5. Wow flutter meter
6. Test tape
   VTT712 : For Tape speed and wow flutter (3kHz)
   VTT724 : For Reference level (1kHz)
   TMT7036 : For Head angle(10kHz),Play back frequency characteristics(1kHz),and dubbing frequency characteristics(63,1,10kHz)
   Because of frequency-mixed tape with 63,1k,10k and 14kHz(250nWb/m -24dB).
   Use this tape together with a filter.
7. Blank tape
   TAPE Ⅰ: AC-225
8. Torque gauge : For play and back tension
   Forward ; TW2111A, Reverse ; TW2121A
   Fast Forward and Rewind ; TW2231A
9. Test disc
   : CTS-1000(12cm),GRG-1211(8cm)
10. Jitter meter

Measurement conditions

Power supply voltage
AC120V(60Hz)

Measurement
output terminal : Speaker out
:TP101(Mesuring for TUNER/DECK/CD)
:Dummy load 6ohm

Radio input signal
AM modulation frequency : 400Hz
Modulation factor : 30%
FM modulation frequency : 400Hz
Frequency displacement : 22.5kHz

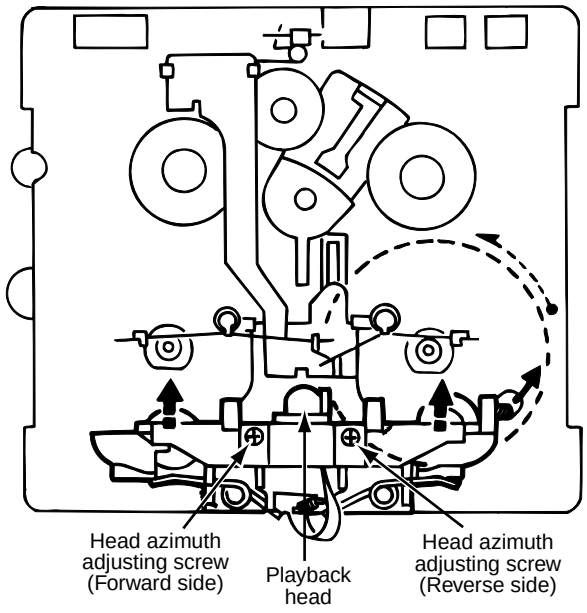
Frequency Range
AM 531kHz~1710kHz
FM 87.5MHz~108MHz

Standard measurement positions of volume and switch
Power : Standby (Light STANDBY Indicator)
Sub woofer VOL. : Minimum
Sound mode : OFF
Main VOL. : 0 Minimum
Traverse mecha set position : Disc 1

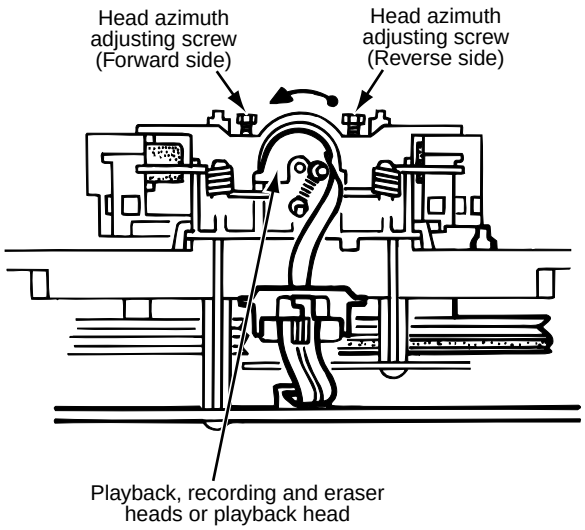
Precautions for measurement
1. Apply 30pF and 33kohm to the IF sweeper output side and 0.082 F and 100kohm in series to the sweeper input side.
2. The IF sweeper output level should be made as low as possible within the adjustable range.
3. Since the IF sweeper is a fixed device, there is no need to adjust this sweeper.
4. Since a ceramic oscillator is used, there is no need to perform any MPX adjustment.
5. Since a fixed coil is used, there is no need to adjust the FM tracking.
6. The input and output earth systems are separated. In case of simultaneously measuring the voltage in both of the input and output systems with an electronic voltmeter for two channels, therefore, the earth should be connected particularly.
7. In the case of BTL connection amplifier, the minus terminal of speaker is not for earthing. Therefore, be sure not to connect any other earth terminal to this terminal. This system is of an OTL system.

■ Arrangement of adjusting positions

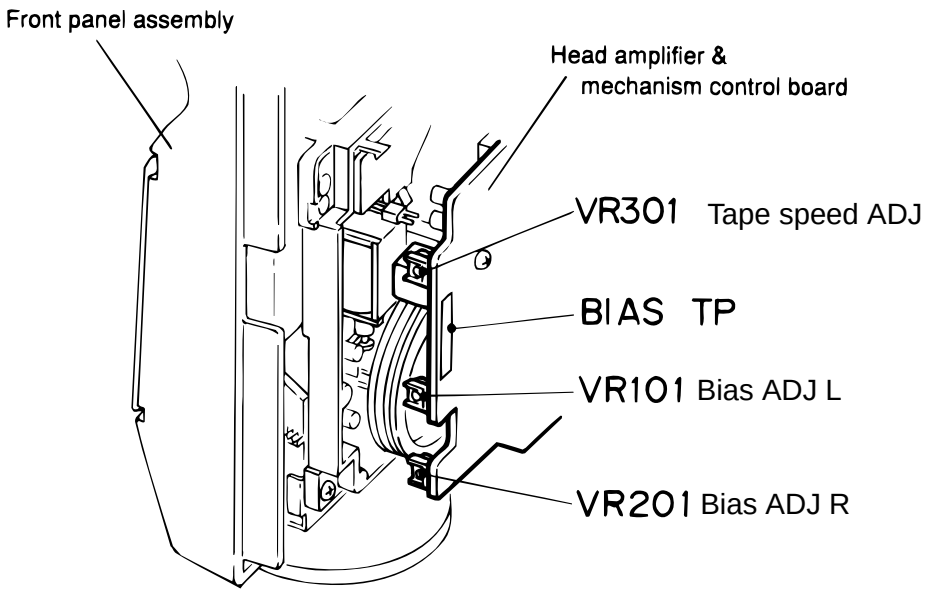
Cassette mechanism section (Mechanism A section)



Cassette mechanism section (Back side)


Head azimuth adjusting screw (Forward side)
Head azimuth adjusting screw (Reverse side)
Playback, recording and eraser heads or playback head

Cassette Mechanism Unit Section



■ Tape recorder section

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Confirmation of head angle	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistor:6Ω) :Headphone terminal	1.Playback the test tape TMT7036(10kHz). 2.With the playback mechanism or recording & playback mechanism, adjust the head azimuth screw so that the forward and reverse output levels become maximum.After adjustment,lock the head azimuth at least by half a turn. 3.In either case,this adjustment should be performed in both the forward and reverse directions with the head azimuth screw.	Maximum output	Adjust the head azimuth screw only when the head has been changed.
Confirmation of tape speed	Test tape :VTT712(3kHz) or TMT7036(3kHz) Measurement output terminal :Headphone terminal	<Constant speed> Adjust VR301 so that the frequency counter reading becomes 3,000Hz±60Hz when playing back the test tape VTT712(3kHz)with the playback mechanism or playback and recording mechanism after ending forward winding of the tape.	Tape speed of decks (A and B) :3,000Hz ±60Hz	VR301

■ Reference values for confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Double tape speed	Test tape :TMT7036(10kHz) Measurement output terminal :Speaker terminal Speaker R (Load resistance:6Ω) measurement output terminal :Headphone terminal	After setting to the double speed motor, confirm that the frequency counter reading becomes 4,800+400/-300Hz when the test tape VTT712 (3kHz) has been play back with the playback mechanism.	4,800+400/ -300Hz	Playback mechanism side
Difference between the forward and reverse speed. P.mecha and R/P mecha speed		When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding, the frequency counter reading of the difference between both of the mechanisms should be 6.0Hz or less.	60Hz or less	Both the playback and recording & playback mechanism
Wow & flutter	Test tape :TMT7036(10kHz) Measurement output terminal :Headphone terminal	When the test tape VTT712(3kHz) has been played back with the playback mechanism or recording and playback mechanism at the beginning of forward winding the frequency counter reading of wow & flutter should be 0.25% or less(WRMS).	with in 0.25% JIS(WTD)	Both the playback and recording & playback mechanism

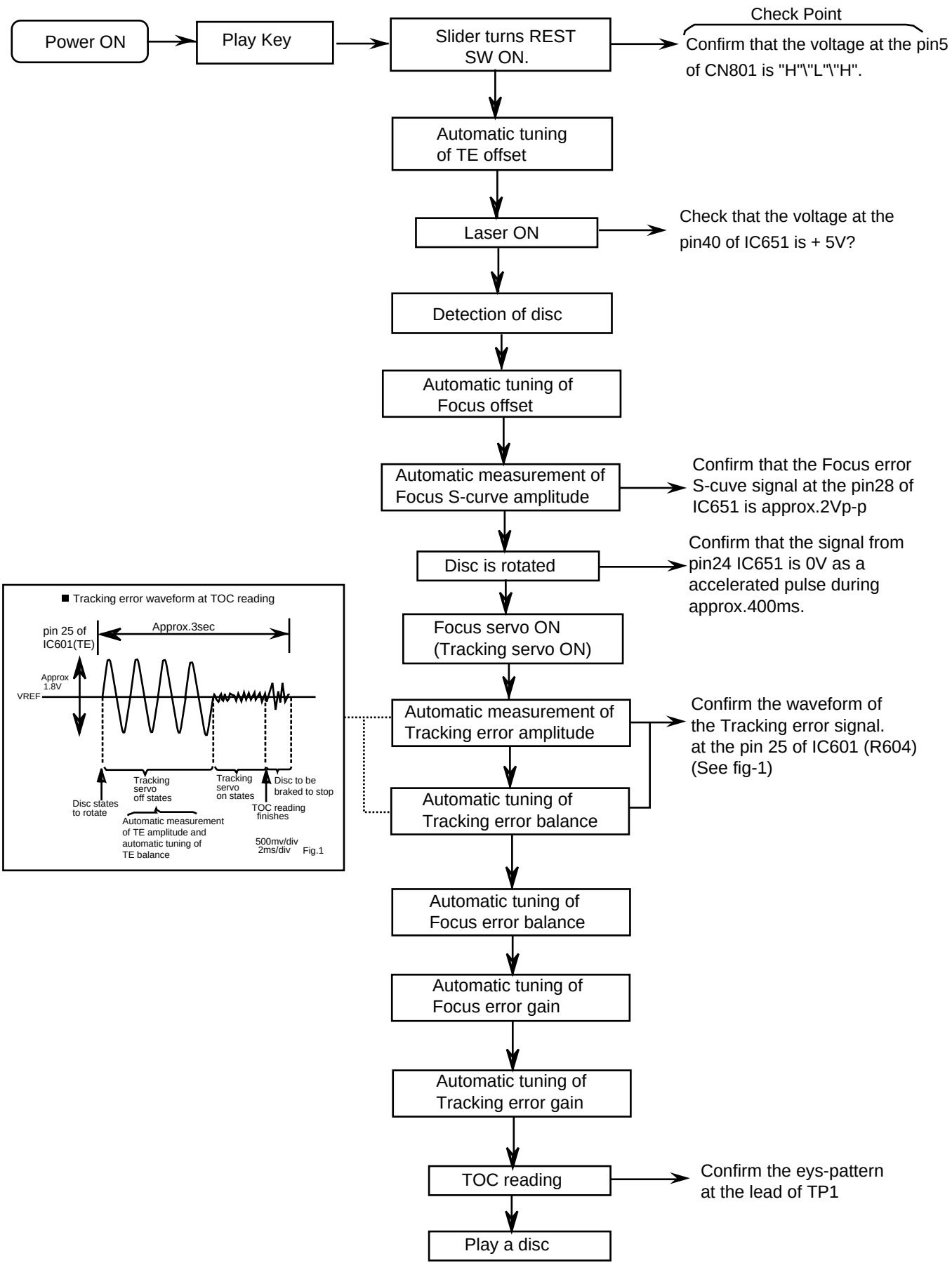
■ Electrical performance

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Adjustment of recording bias current (Reference value)	*Mode : Forward or reverse mode *Recording mode *Test tape : AC-225 Measurement output terminal :Both recording and headphone terminals	1.With the recording and playback mechanism, load the test tapes(AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing conditions in advance. 2.After connecting 100Ω in series to the recorder head,measure the bias current with a valve voltmeter at both of the terminals. 3.After resetting the [PAUSE] mode,start recording. At this time,adjust VR101 for LcH and VR201 for RcH so that the recording bias current values become 4.0μA (TYP Ⅰ).	AC-225 :4.20μA	LcH :VR101 RcH :VR201
Adjustment of recording and playback frequency characteristics	Reference frequency :1kHz and 10kHz (REF:-20dB) Test tape :TYP Ⅰ AC-225 Measurement input terminal :OSC IN	1.With the recording and playback mechanism,load the test tape(AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing condition in advance. 2.While repetitively inputting the reference frequency signal of 1kHz and 10kHz from OSC IN, record and playback the test tape. 3.While recording and playing back the test tape in TYP Ⅰ,adjust VR101 for LcH and VR201 for RcH so that the output deviation between 1kHz and 10kHz becomes -1dB±2dB.	Output deviation between 1kHz and 10kH :-1dB±2dB	LcH :VR101 RcH :VR201

■ Reference values for electrical function confirmation items

Items	Measurement conditions	Measurement method	Standard values	Adjusting positions
Recording bias frequency	*Recording and playback side forward or reverse *Test tape :TYP Ⅰ AC-225 *Measurement terminal BIAS TP on P.C.board	1.With the recording and playback mechanism. load the test tape (AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing conditions in advance. 2.Confirm that the BIAS TP frequency on the P.C.board is 100kHz±6kHz.	100kHz +9kHz -7kHz	
Eraser current (Reference value)	*Recording and playback side forward or reverse *Recording mode *Test tape :AC-225 Measurement terminal Both of the eraser head	1.With the recording and playback mechanism, load the test tapes(AC-225 to TYP Ⅰ),and set the mechanism to the recording and pausing condition in advance. 2.After setting to the recording conditions,connect 1MΩ in series to the eraser head on the recording and playback mechanism side,and measure the eraser current from both of the eraser terminal.	TYP Ⅰ :75mA	

Flow of functional operation until TOC read

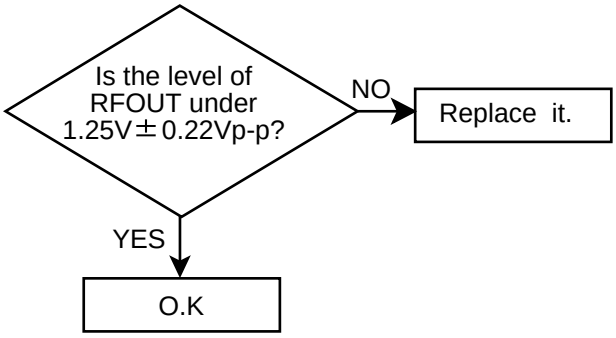

Power ON
Play Key
Slider turns REST SW ON.
Check Point
Confirm that the voltage at the pin5 of CN801 is "H"\"L"\"H".
Automatic tuning of TE offset
Laser ON
Check that the voltage at the pin40 of IC651 is + 5V?
Detection of disc
Automatic tuning of Focus offset
Automatic measurement of Focus S-curve amplitude
Confirm that the Focus error S-cuve signal at the pin28 of IC651 is approx.2Vp-p
Disc is rotated
Confirm that the signal from pin24 IC651 is 0V as a accelerated pulse during approx.400ms.
Focus servo ON (Tracking servo ON)
Automatic measurement of Tracking error amplitude
Confirm the waveform of the Tracking error signal. at the pin 25 of IC601 (R604) (See fig-1)
Automatic tuning of Tracking error balance
Automatic tuning of Focus error balance
Automatic tuning of Focus error gain
Automatic tuning of Tracking error gain
TOC reading
Confirm the eys-pattern at the lead of TP1
Play a disc
■ Tracking error waveform at TOC reading
pin 25 of IC601(TE)
Approx.3sec
Approx 1.8V
VREF
Disc states to rotate
Tracking servo off states
Tracking servo on states
Disc to be braked to stop
TOC reading finishes
Automatic measurement of TE amplitude and automatic tuning of TE balance
500mv/div
2ms/div
Fig.1

Maintenance of laser pickup

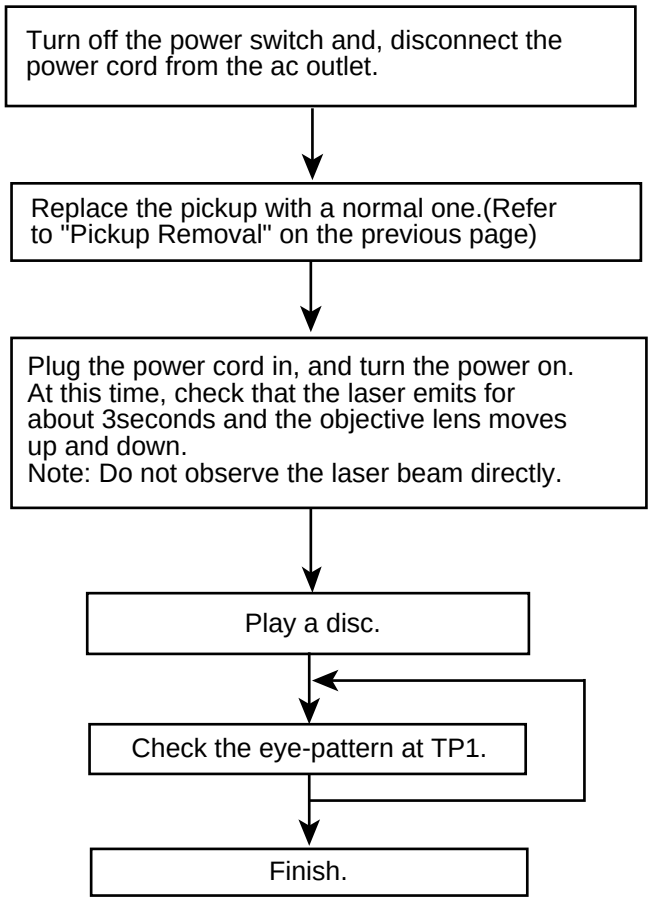
(1) Cleaning the pick up lens
Before you replace the pick up, please try to clean the lens with a alcohol soaked cotton swab.

(2) Life of the laser diode
When the life of the laser diode has expired, the following symptoms will appear.

1. The level of RF output (EFM output : amplitude of eye pattern) will below.



Replacement of laser pickup

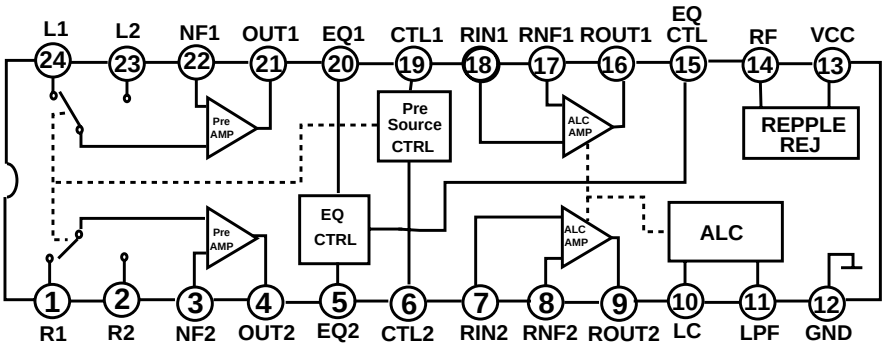

Turn off the power switch and, disconnect the power cord from the ac outlet.
Replace the pickup with a normal one.(Refer to "Pickup Removal" on the previous page)
Plug the power cord in, and turn the power on. At this time, check that the laser emits for about 3seconds and the objective lens moves up and down.
Note: Do not observe the laser beam directly.
Play a disc.
Check the eye-pattern at TP1.
Finish.

(3) Semi-fixed resistor on the APC PC board
The semi-fixed resistor on the APC printed circuit board which is attached to the pickup is used to adjust the laser power. Since this adjustment should be performed to match the characteristics of the whole optical block, do not touch the semi-fixed resistor.
If the laser power is lower than the specified value, the laser diode is almost worn out, and the laser pickup should be replaced.
If the semi-fixed resistor is adjusted while the pickup is functioning normally, the laser pickup may be damaged due to excessive current.

Description of major ICs

■ AN7345(IC302) PB/REC AMP

1. Block diagram

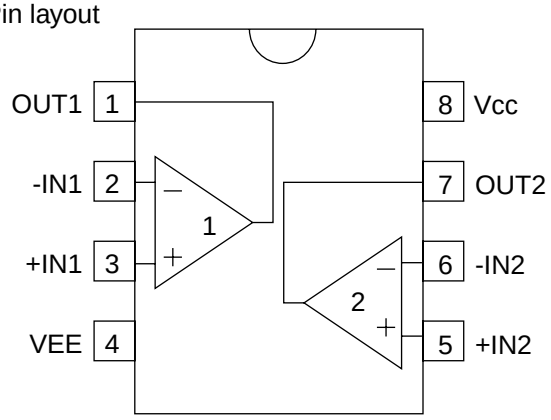


2. Pin Function

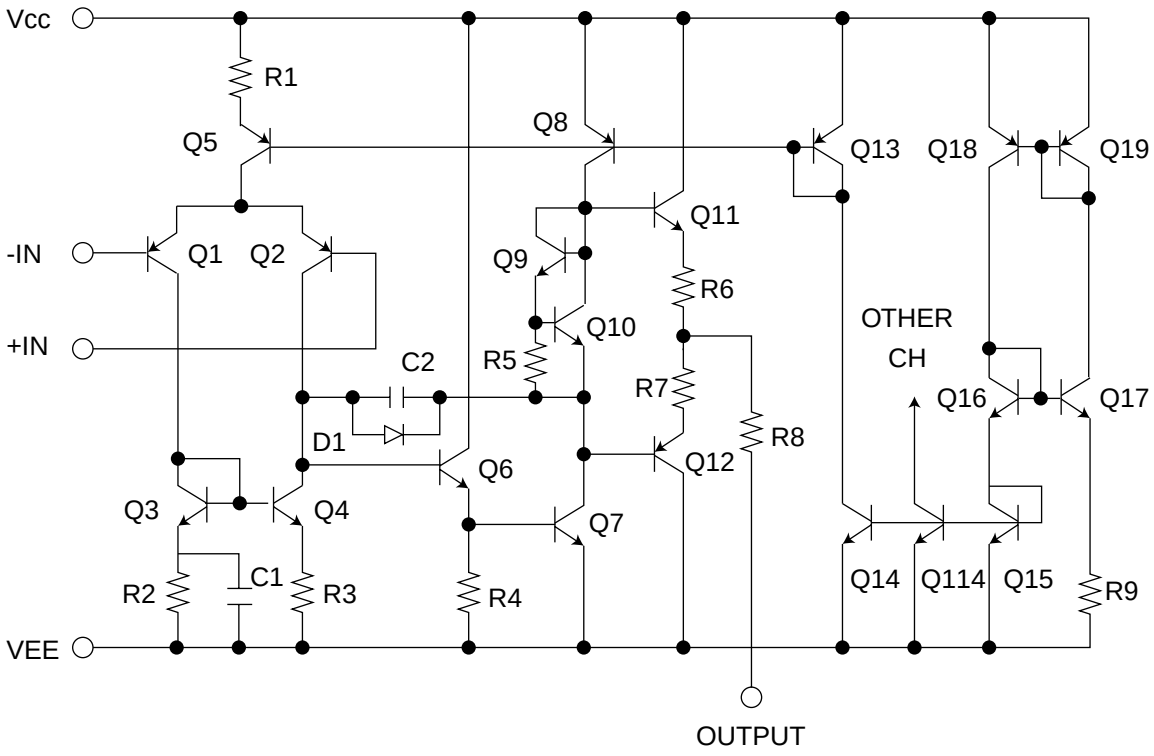
Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	**R1**	I	**Playback amplifier input**	13	**Vcc**	I	Power supply
2	**R2**	I	**Playback amplifier input**	14	RF	I	Ripple filter
3	**NF2**	I	**Playback amplifier negative feedback**	15	EQCTL	I	EQ control
4	**OUT2**	O	**Playback amplifier output**	16	ROUT1	O	Recording amplifier output
5	**EQ2**	I	**Equalizer**	17	RNF1	I	Recording amplifier negative feedback
6	**CTL2**	I	**Pre Amplifier input switching time constant**	18	RIN1	I	Recording amplifier input
7	**RIN2**	I	**Recording amplifier input**	19	CTL1	I	Pre amplifier input switching control
8	**RNF2**	I	**Recording amplifier negative feedback**	20	EQ1	I	Equalizer
9	**ROUT2**	O	**Recording amplifier output**	21	OUT1	O	Playback amplifier output
10	**LC**	I	**ALC low cut**	22	NF1	I	Playback amplifier negative feedback
11	**LPF**	I	**ALC low pass filter**	23	L2	I	Playback amplifier input
12	**GND**	I	—	24	L1	I	Playback amplifier input

■BA15218F-XE (IC652) / BA15218N (IC481,501,502,526,546,571) : Dual op. amp.

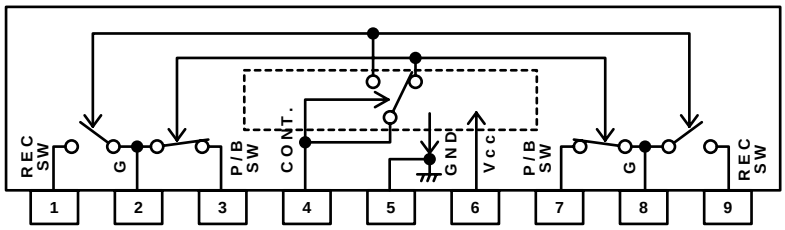
1. Pin layout



2. Block diagram

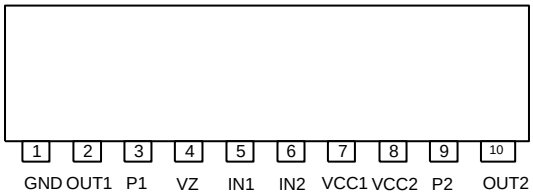


■ BA3126N(IC301) : R/P Switch



■ LB1641 (IC851,IC852) : DC motor driver

1. Pin layout

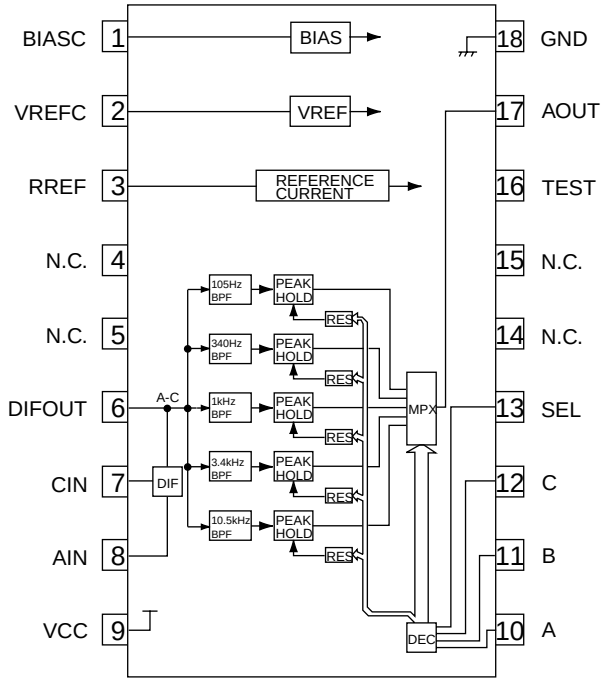


2. Pin function

Input		Output		Mode
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	CLOCKWISE
0	1	0	1	COUNTER-CLOCKWISE
1	1	0	0	Brake

■ BA3835S (IC812) : SPI B.P.F.

1.Block Diagrams

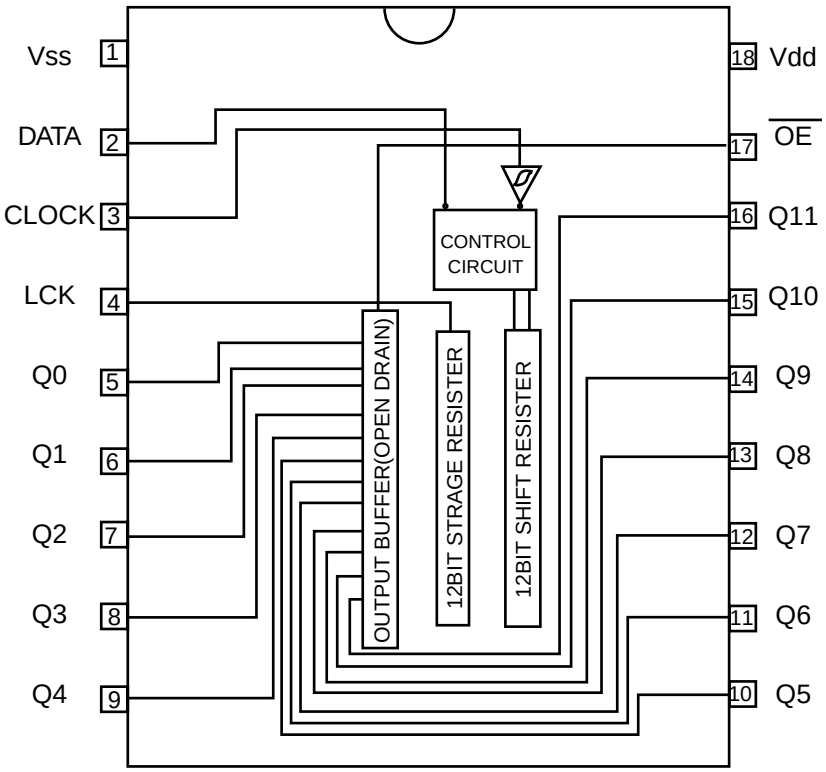


2.Pin Function

No.	Symbol	I/O	Function
1	BIASC	-	Decoupling condenser connection terminal.
2	VREFC	-	Decoupling condenser connection terminal.
3	RPEF	-	Reference resistance connection terminal.
4	NC	-	Non connect.
5	NC	-	Non connect.
6	NC	-	Non connect.
7	CIN	-	Connected to GND of audio system through a condenser.
8	AIN	I	Inputs the audio signal through a condenser.
9	VCC	-	Power supply terminal.
10	SPI-A	O	Output selection control terminal.
11	SPI-B	O	Output selection control terminal.
12	SPI-C	O	Output selection control terminal.
13	SPICSB	O	Output selection control terminal.
14	NC	-	Non connect.
15	NC	-	Non connect.
16	TEST	-	Connected to GND upon normal use.
17	AOUT	O	Multi-plexor output terminal.
18	GND	-	Connect to GND.

■BU2092/F(IC811):PORT EXPANDER

1.Terminal Layout

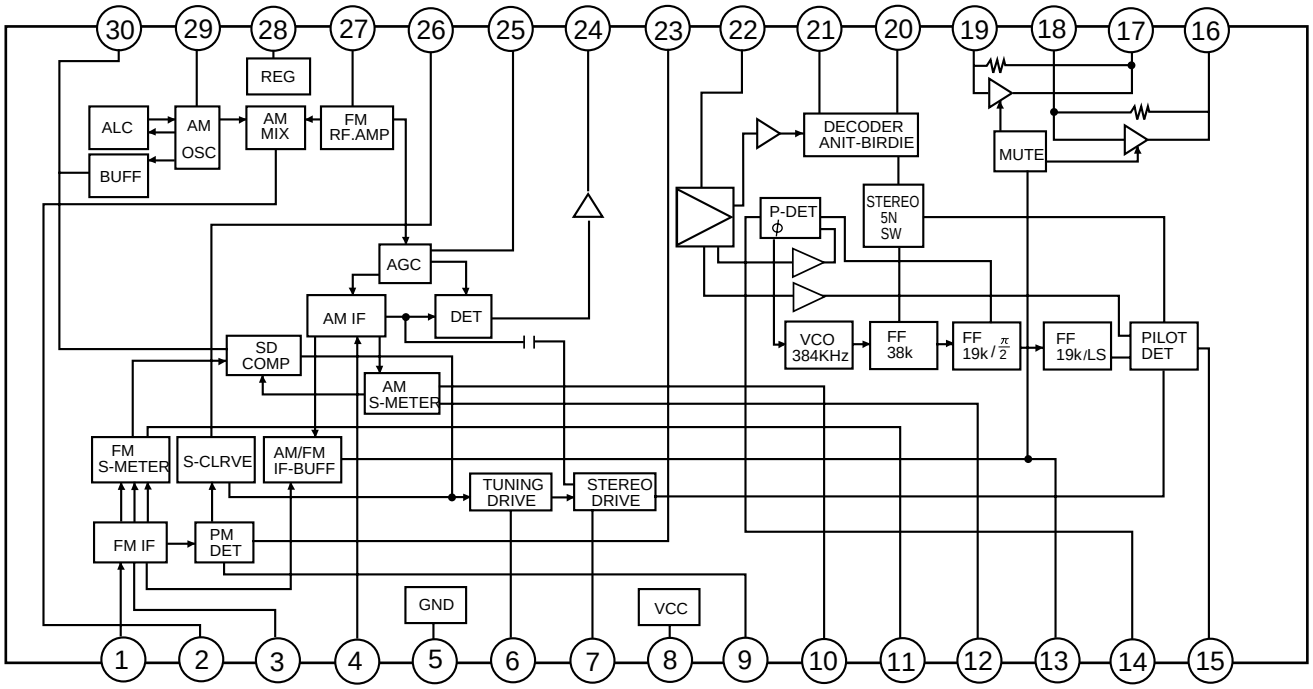


2.Pin Function

Pin No.	Symbol	I/O	Function
1	Vss	-	Connect to GND
2	DATA	I	Serial Data input
3	CLOCK	I	Shift Clock of Data
4	LCK	I	Latch Clock of Data
5~16	Q0~Q11	O	Parallel Data Output Latch Data: L / H OUTPUT: ON / OFF
17	$\overline{OE}$	I	Output Enable
18	Vdd	-	Power Supply

■ LA1838(IC1): FM AM IF AMP&detector, FM MPX decoder

1. Block Diagram

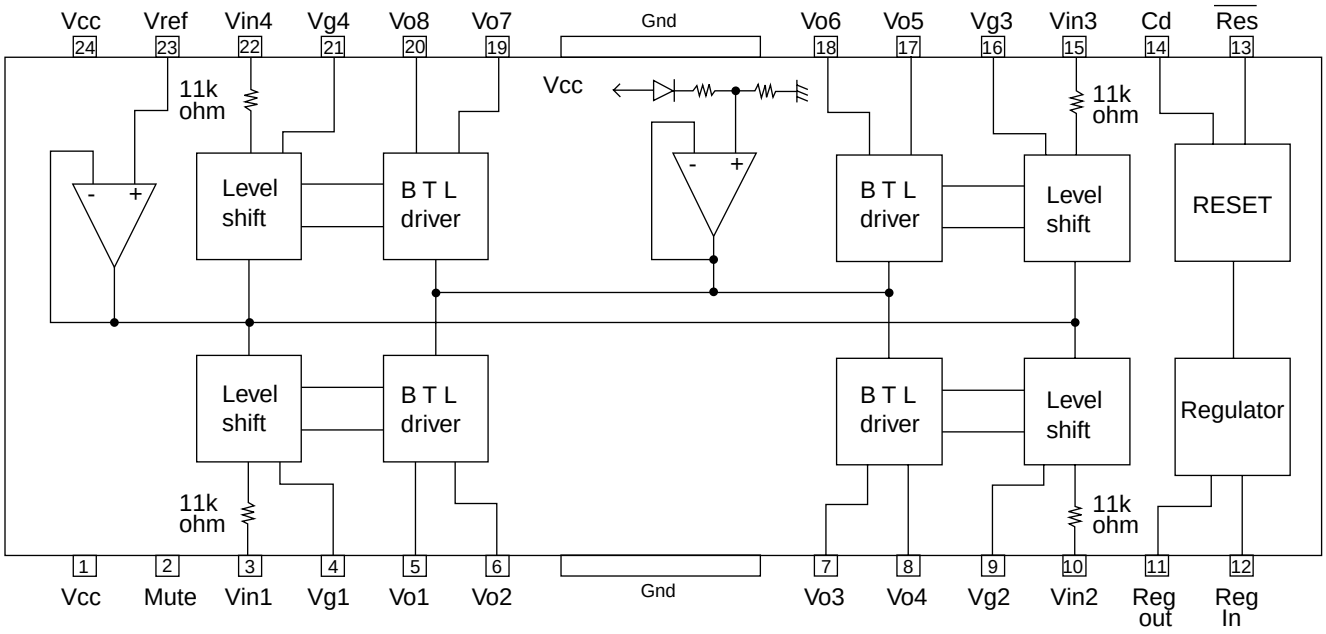


2. Pin Function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	FM IN	I	This is an input terminal of FM IF signal.	16	L OUT	O	Left channel signal output.
2	AM MIX	O	This is an out put terminal for AM mixer.	17	R OUT	O	Right channel signal output.
3	FM IF	I	Bypass of FM IF	18	L IN	I	Input terminal of the left channel post AMP.
4	AM IF	I	Input of AM IF Signal.	19	R IN	I	Input terminal of the right channel post AMP.
5	GND	–	This is the device ground terminal.	20	RO	O	Mpx Right channel signal output.
6	TUNED	O	When the set is tuning, this terminal becomes "L".	21	LO	O	Mpx Left channel signal output.
7	STEREO	O	Stereo indicator output. Stereo "L", Mono: "H"	22	IF IN	I	Mpx input terminal
8	VCC	–	This is the power supply terminal.	23	FM OUT	O	FM detection output.
9	FM DET	–	FM detect transformer.	24	AM DET	O	AM detection output.
10	AM SD	–	This is a terminal of AM ceramic filter.	25	AM AGC	I	This is an AGC voltage input terminal for AM
11	FM VSM	O	Adjust FM SD sensitivity.	26	AFC	–	This is an output terminal of voltage for FM-AFC.
12	AM VSM	O	Adjust AM SD sensitivity.	27	AM RF	I	AM RF signal input.
13	MUTE	I/O	When the signal of IF REQ of IC121(LC72131) appear, the signal of FM/AM IF output. //Muting control input.	28	REG	O	Register value between pin 26 and pin28 desides the frequency width of the input signal.
14	FM/AM	I	Change over the FM/AM input. "H" :FM, "L" : AM	29	AM OSC	–	This is a terminal of AM Local oscillation circuit.
15	MONO/ST	O	Stereo : "H", Mono: "L"	30	OSC BUFFER	O	AM Local oscillation Signal output.

■ LA6541-X (IC801) : Servo driver

1. Pin Layout & block diagram

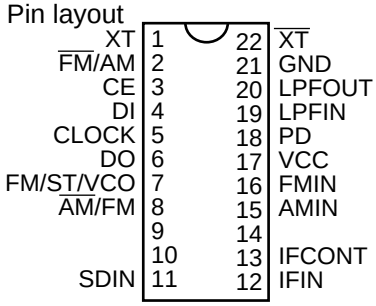


2. Pin function

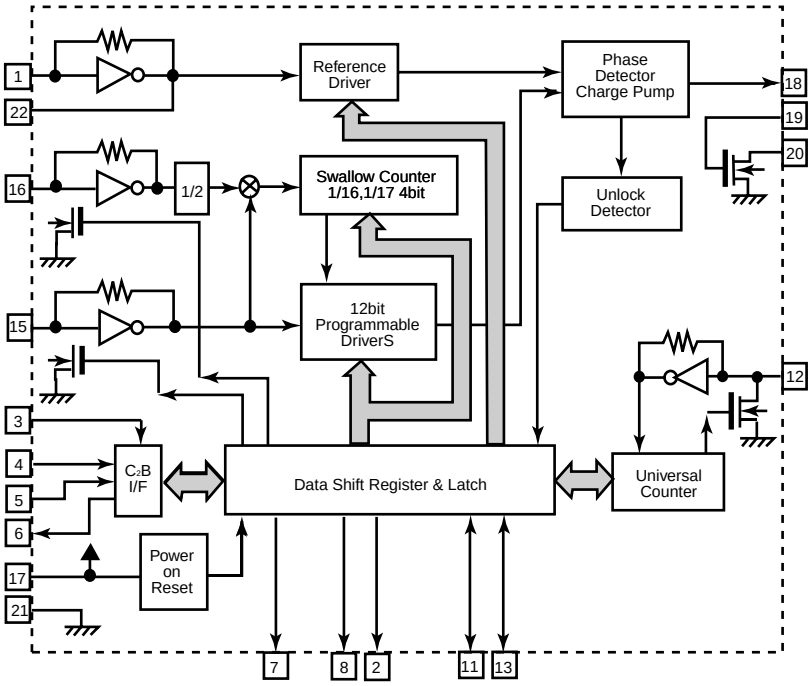
Pin No.	Symbol	Function
1	Vcc	Power supply (Shorted to pin 24)
2	Mute	All BTL amplifier outputs ON/OFF
3	Vin1	BTL AMP 1 input pin
4	Vg1	BTL AMP 1 input pin (For gain adjustment)
5	Vo1	BTL AMP 1 input pin (Non inverting side)
6	Vo2	BTL AMP 1 input pin (Inverting side)
7	Vo3	BTL AMP 2 input pin (Inverting side)
8	Vo4	BTL AMP 2 input pin (Non inverting side)
9	Vg2	BTL AMP 2 input pin (For gain adjustment)
10	Vin2	BTL AMP 2 input pin
11	Reg Out	External transistor collector (PNP) connection. 5V power supply output
12	Reg In	External transistor (PNP) base connection
13	Res	Reset output
14	Cd	Reset output delay time setting (Capacitor connected externally)
15	Vin3	BTL AMP 3 input pin
16	Vg3	BTL AMP 3 input pin (For gain adjustment)
17	Vo5	BTL AMP 3 output pin (Non inverting side)
18	Vo6	BTL AMP 3 output pin (Inverting side)
19	Vo7	BTL AMP 4 output pin (Inverting side)
20	Vo8	BTL AMP 4 output pin (Non inverting side)
21	Vg4	BTL AMP 4 output pin (For gain adjustment)
22	Vin4	BTL AMP 4 output pin
23	Vref	Level shift circuit's reference voltage application
24	Vcc	Power supply (Shorted to pin 1)

■ LC72136N (IC2) : PLL frequency synthesizer

1. Pin layout



2. Block diagram



3. Pin function

Pin No.	Symbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	XT	I	X'tal oscillator connect (75kHz)	12	IFIN	I	IF counter signal input
2	$\overline{FM}$/AM	O	LOW:FM mode	13	IFCONT	O	IF signal output
3	CE	I	When data output/input for 4pin(input) and 6pin(output): H	14		-	Not use
4	DI	I	Input for receive the serial data from controller	15	AMIN	I	AM Local OSC signal output
5	CLOCK	I	Sync signal input use	16	FMIN	I	FM Local OSC signal input
6	DO	O	Data output for Controller Output port	17	VCC	-	Power suplly(VDD=4.5-5.5V) When power ON:Reset circuit move
7	FM/ST/VCO	O	"Low": MW mode	18	PD	O	PLL charge pump output(H: Local OSC frequency Height than Reference frequency. L: Low Agreement: Height impedance)
8	$\overline{AM}$/FM	O	Open state after the power on reset	19	LPFIN	I	Input for active lowpassfilter of PLL
9	LW	I/O	Input/output port	20	LPFOUT	O	Output for active lowpassfilter of PLL
10	MW	I/O	Input/output port	21	GND	-	Connected to GND
11	SDIN	I/O	Data input/output	22	$\overline{XT}$	I	X'tal oscillator(75KHz)

■ MN101C35DBC1(IC810) : System controller

Pin function (1/2)

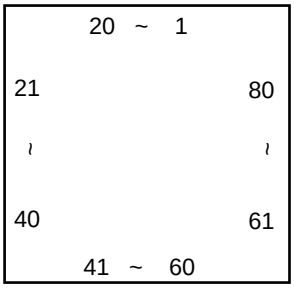
Pin No.	Symbol	I/O	Function
1	KCMND	O	VC3 Serial data output
2	MSTAT	I	VC3 status input
3	KCLK	O	VC3 Serial clock
4	DATAOUT	O	SLC/TUNER data output
5	DATAIN	I	TUNER data input
6	CK	O	SLC/TUNER clock
7	NC	-	Not used
8	VDD	-	Power supply +5V
9,10	OSC2,1	I/O	Oscillation terminal (8MHz)
11	VSS	-	Connect to GND
12,13	NC	-	Not used
14	MMOD	-	Connect to GND
15	VREF-	-	Connect to GND
16C19	KEY1~4	I	Key matrix input 1~4
20	SLCKEY1	I	SLC Key input 1
21	SLCKEY2	I	SLC Key input 2
22	NC	-	Not used
23	SPIDTI	I	SPI Analog data input
24	VREF+	-	AD +5V
25	MRDY	I	VC3 Ready
26	RESET	I	Micon reset
27	BASS VOL+	I	Bass volume +
28	BASS VOL-	I	Bass volume -
29	AUX MUTE	O	AUX muting
30	RDSDATA/KARA	I	RDS Data / Karaoke
31	SPI A	O	SPI A data
32	SPI B	O	SPI B data
33	REMIN	I	Remote control signal input
34	PHOTOA	I	SLC Photo-A
35	PHOTOB	I	SLC Photo-B
36	SOUNDMODE+	I	Soundmode reverse
37	RDS_CLK	I	RDS Clock
38	PRT	I	Protector input
39	TAPE LED	O	Tape LED
40	ECON	O	Economy ON
41	POUT	O	Power ON
42	VOLDA/EXT	O	Volume / EXT IC Data
43	VOLCK/EXT	O	Volume / EXT IC CLK
44	EXTCE	O	EXT IC Chip select
45	SLCCE	O	SLC Chip enable
46	VC3 RESET	O	VC3 Reset
47~63	G17~G1	O	FL Display grid

Pin function (2/2)

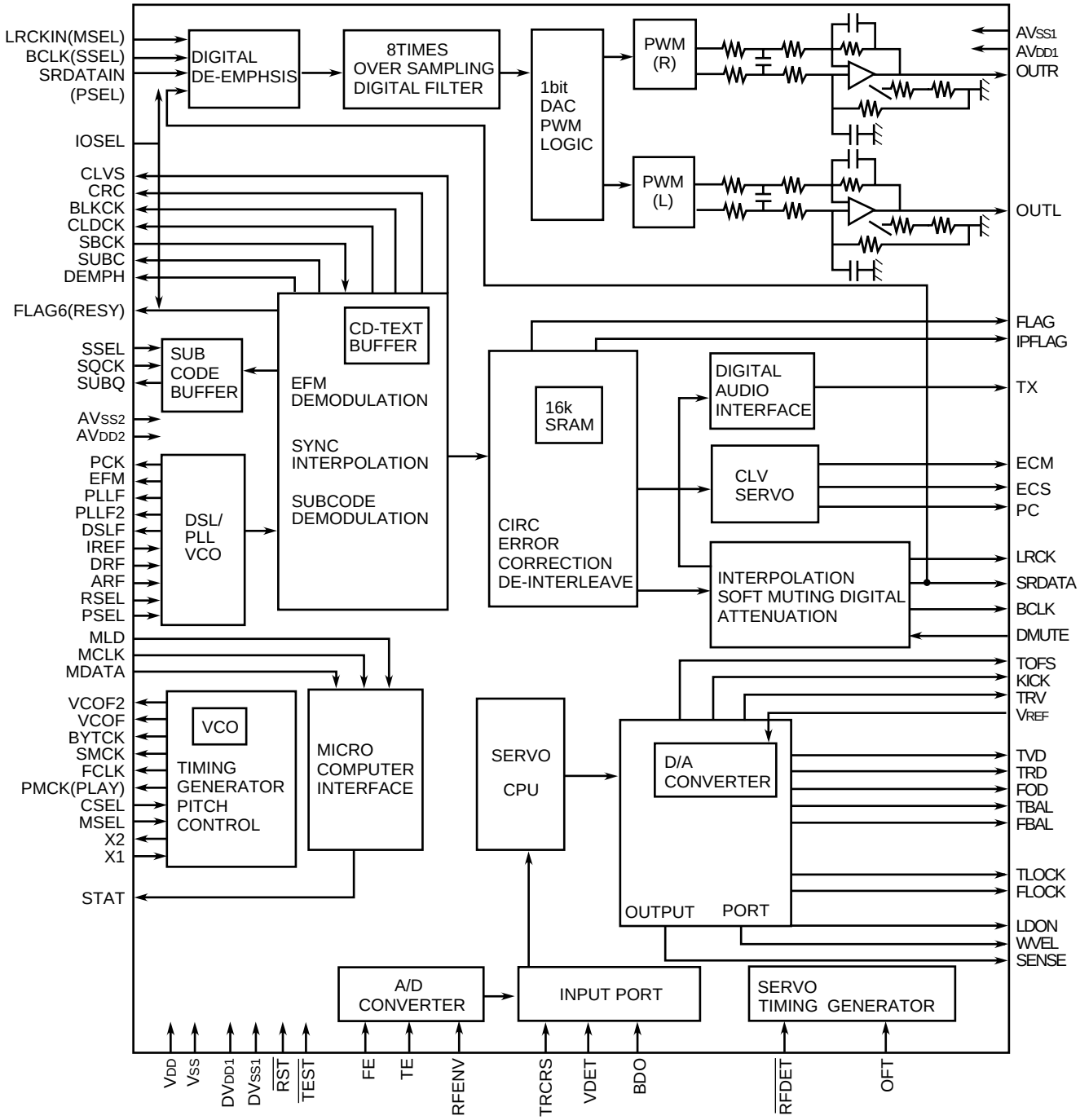
Pin No.	Symbol	I/O	Function
64~85	P22~P1	O	FL segment control signal output
86	TUCE	O	Tuner chip enable
87	SMUTE	O	System mute
88	SEARCH LE	O	Skip LED
89	CD1 LED	O	LED Control signal output (CD1)
90	CD2 LED	O	LED Control signal output (CD2)
91	CD3 LED	O	LED Control signal output (CD3)
92	R SEARCH	I	Reverse skip
93	MSI	I	Music scan input
94	MPX	I	Tuner stereo indicator
95	INH	I	Backup mode detect
96	F SEARCH	I	Forward skip
97	VOL -	I	Rotary encoder VOL-
98	VOL +	I	Rotary encoder VOL+
99	SOUNDMODE	I	Soundmode foeward
100	VPP	-	-B for FL

■ MN662748RPM (IC651) : Digital servo & digital signal processor

1. Pin layout



2.Block diagram

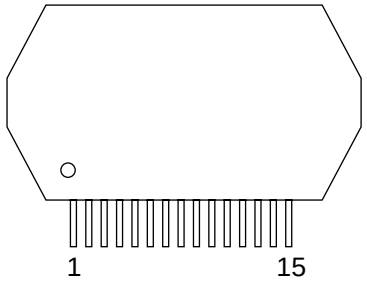


3. Pin function

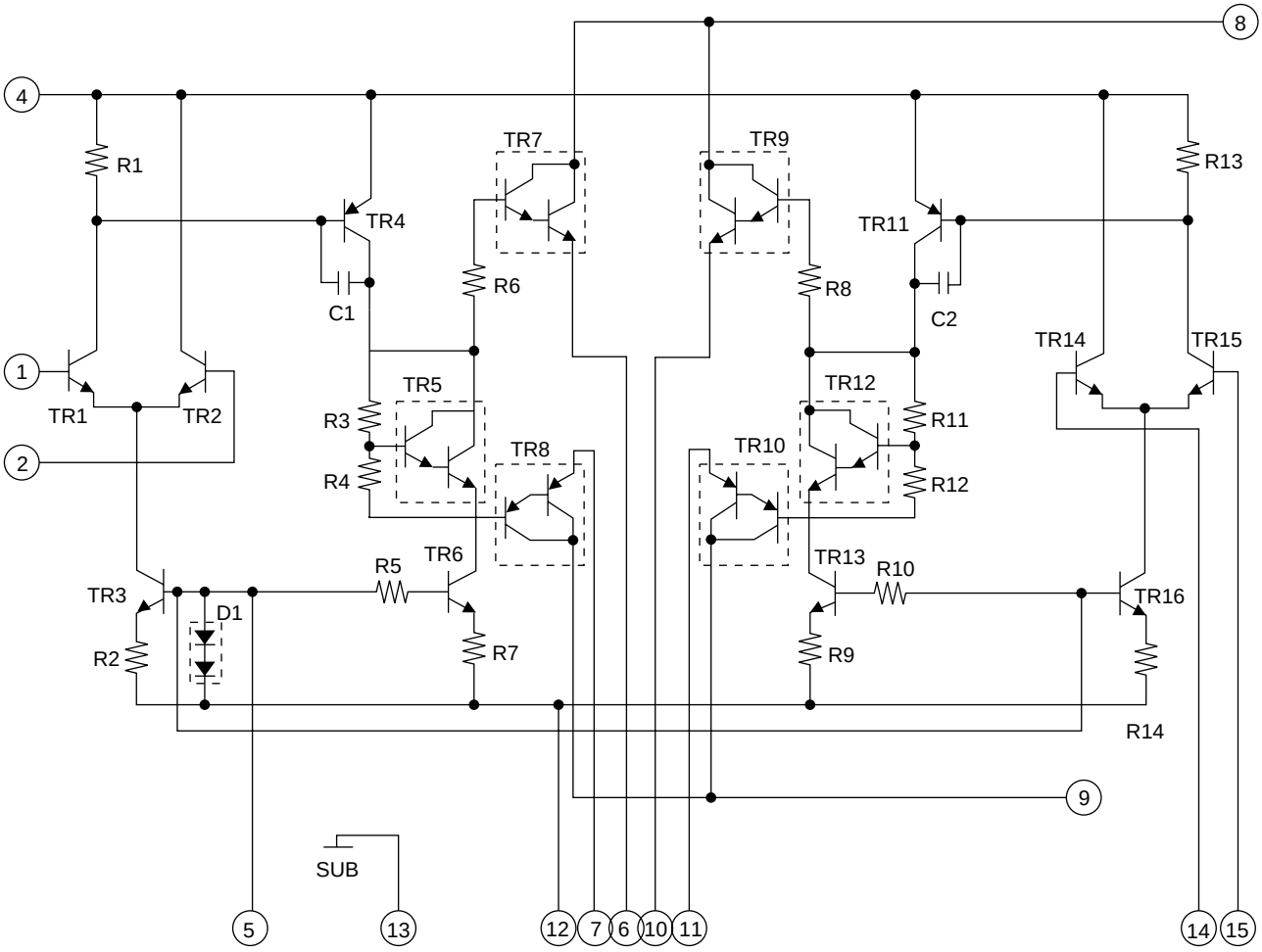
Pin No.	Dymbol	I/O	Function	Pin No.	Symbol	I/O	Function
1	BCLK	O	Not used	41	PLLF2	–	Not used
2	LRCK	O	Not used	42	TOFS	–	Not used
3	SRDATA	O	Not used	43	WVEL	–	Not used
4	DVDD1	–	Power supply (Digital)	44	ARF	I	RF signal input
5	DVSS1	–	Connected to GND	45	IREF	I	Reference current input pin
6	TX	O	Digital audio interface output	46	DRF	I	Bias pin for DSL
7	MCLK	I	CPU command clock signal input (Data is latched at signal's rising point)	47	DSLF	I/O	Loop filter pin for DSL
8	MDATA	I	CPU command data input	48	PLLF	I/O	Loop filter pin for PLL
9	MLD	I	CPU command load signal input	49	VCOF	–	Not used
10	SENSE	O	Sense signal output	50	AVDD2	–	Power supply (Analog)
11	FLOCK	O	Focus lock signal output Active :Low	51	AVSS2	–	Connected to GND (Analog)
12	TLOCK	O	Tracking lock signal output Active :Low	52	EFM	–	Not used
13	BLKCK	O	sub-code/block/clock signal output	53	PCK/ DSLB	O	DSL balance output
14	SQCK	I	Outside clock for sub-code Q resister input	54	VCOF2	–	The external circuit is regulated for crystal.
15	SUBQ	O	Sub-code Q -code output	55	SUBC	–	Not used
16	DMUTE	–	Connected to GND	56	SBCK	–	Not used
17	STATUS	O	Status signal (CRC,CUE,CLVS,TTSTOP,ECLV,SQOK)	57	VSS	–	Connected to GND (for X'tal oscillation circuit)
18	RST	I	Reset signal input (L:Reset)	58	XI	I	Input of 16.9344MHz X'tal oscillation circuit
19	SMCK	–	Not used	59	X2	O	Output of X'tal oscillation circuit
20	PMCK	–	Not used	60	VDD	–	Power supply (for X'tal oscillation circuit)
21	TRV	O	Traverse enforced output	61	BYTCK	–	Not used
22	TVD	O	Traverse drive output	62	CLDCK	–	Not used
23	PC	–	Not used	63	FCLK	–	Not used
24	ECM	O	Spindle motor drive signal (Enforced mode output) 3-State	64	IPPLAG	–	Not used
25	ECS	O	Spindle motor drive signal (Servo error signal output)	65	FLAG	–	Not used
26	KICK	O	Kick pulse output	66	CLVS	–	Not used
27	TRD	O	Tracking drive output	67	CRC	–	Not used
28	FOD	O	Focus drive output	68	DEMPH		Not used
29	VREF	I	Reference voltage input pin for D/A output block (TVD,FOD,FBA,TBAL)	69	RESY	–	Not used
30	FBAL	O	Focus Balance adjust signal output	70	IOSEL	–	pull up
31	TBAL	O	Tracking Balance adjust signal output	71	TEST	–	pull up
32	FE	I	Focus error signal input (Analog input)	72	AVDD1	–	Power supply (Digital)
33	TE	I	Tracking error signal input (Analog input)	73	OUT L	O	Lch audio output
34	RF ENV	I	RF envelope signal input (Analog input)	74	AVSS1	–	Connected to GND
35	VDET	I	Vibration detect signal input (H:detect)	75	OUT R	O	Rch audio output
36	OFT	I	Off track signal input (H:off track)	76	RSEL	–	pull up
37	TRCRS	I	Track cross signal input	77	CSEL	–	Connected to GND
38	RFDET	I	RF detect signal input (L:detect)	78	PSEL	–	Connected to GND
39	BDO	I	BDO input pin (L:detect)	79	MSEL	–	Connected to GND
40	LDON	O	Laser ON signal output (H:on)	80	SSEL	–	Pull up

■STK402-050 (IC602) : Power amp.

1.Pin layout

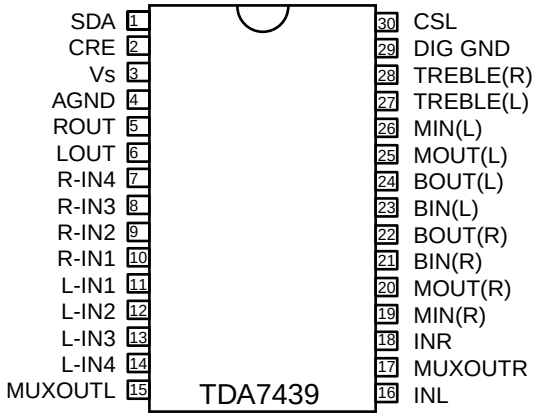


2.Block diagram

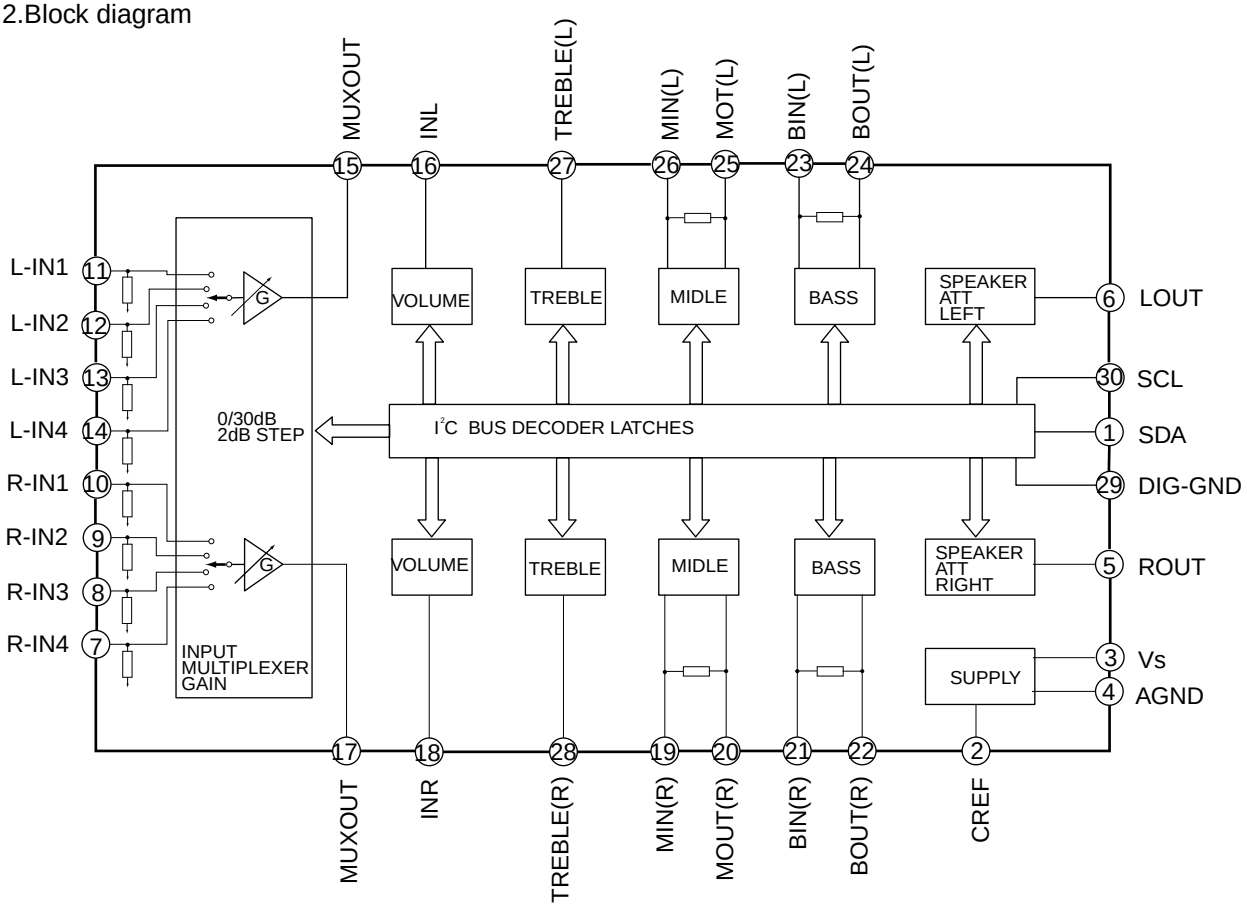


■ TDA7439 (IC436) : Control volume

1.Pin layout



2.Block diagram



MX-G70

JVC

VICTOR COMPANY OF JAPAN, LIMITED
AUDIO & COMMUNICATION BUSINESS DIVISION
PERSONAL & MOBILE NETWORK BUSINESS UNIT. 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

(No.20920)

Printed in Japan
200103(V)

PARTS LIST

[MX-G70]

* All printed circuit boards and its assemblies are not available as service parts.

Area suffix

J ---------- U.S.A.
C ---------- Canada

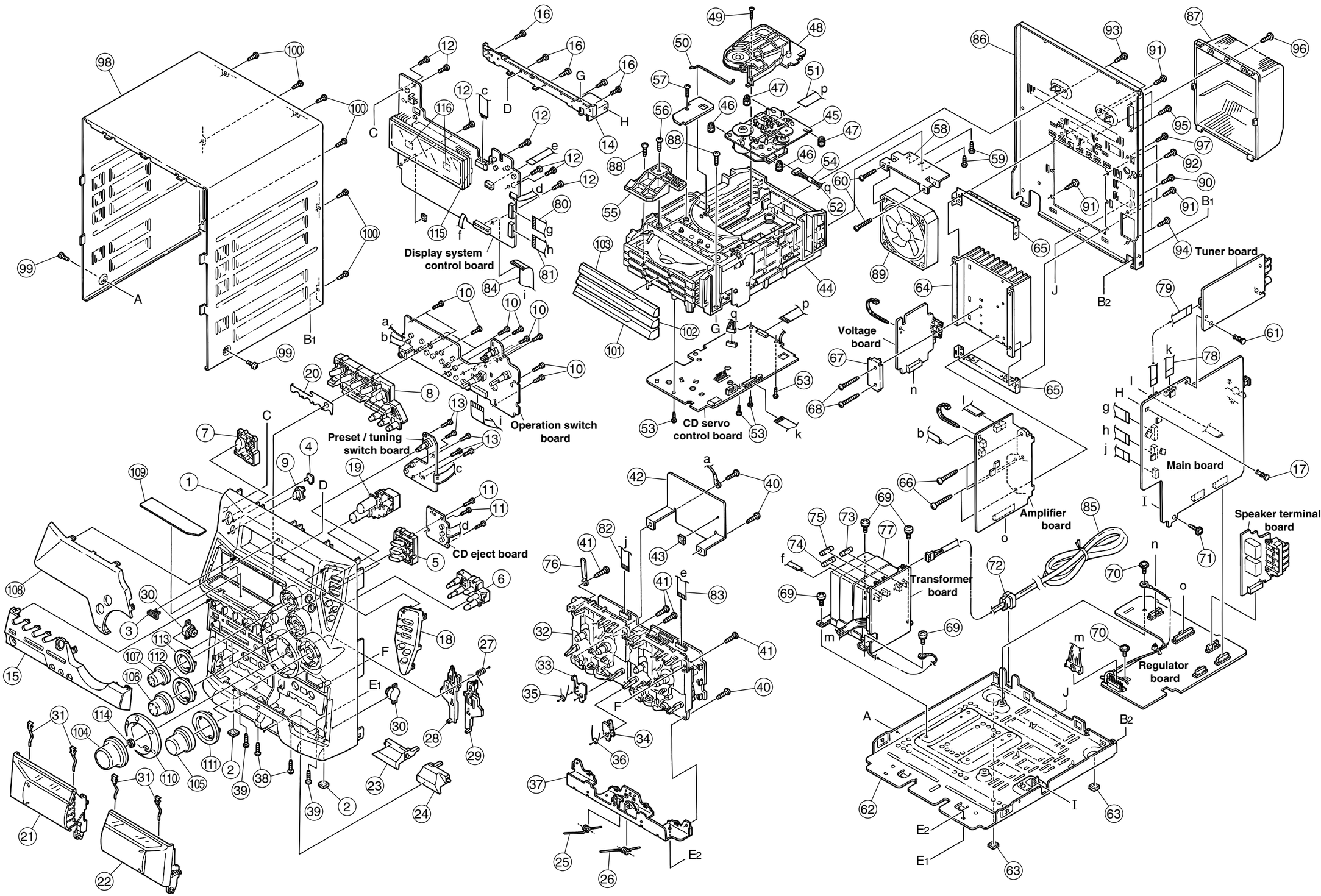
- Contents -

Exploded view of general assembly and parts list ---------- 3- 3
CD changer mechanism assembly and parts list ---------- 3- 6
CD mechanism assembly and parts list ---------- 3- 8
Cassette mechanism assembly and parts list ---------- 3- 9
Electrical parts list ---------- 3-13
Packing materials and accessories parts list ---------- 3-26

< MEMO >

Exploded view of general assembly and parts list

Block No. M 1 M M



■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	GV10057-001A	FRONT PANEL	1		
	2	E75896-001	FELT SPACER	2		
	3	GV40077-002A	JVC BADGE	1		
	4	GV40136-001A	STBY.INDICATOR	1		
	5	GV30154-001A	CD BUTTON	1		
	6	GV20104-002A	CD EJECT BUTTON	1		
	7	GV30137-001A	POWER BUTTON	1		
	8	GV30177-001A	CONTROL BUTTON	1		
	9	GV30139-001A	REMOTO LENS	1		
	10	QYSDSF2608Z	SCREW	12	ON VOLUME BRD.	
	11	QYSDSF2608Z	SCREW	3	ON CD BRD.	
	12	QYSDSF2608Z	SCREW	7	ON MICOM BRD.	
	13	QYSDSF2608Z	SCREW	5	ON SOURCE BRD.	
	14	GV30129-001A	STAY BRACKET	1		
	15	GV10060-007A	ORNAMENT	1		
	16	QYSDSF2608Z	SCREW	5	STY.BRKT.+F.PNL	
	17	FMYH4004-001	PLASTIC RIVET	1	M.BRD.+ STY BRK	
	18	GV20103-001A	SUB. PANEL	1		
	19	GV30138-001A	FRONT BUTTON	1		
	20	GV40185-002A	COVER SHEET	1		
	21	GV30211-004A	C.HOLDER ASSY(L)	1		
	22	GV30212-004A	C.HOLDER ASSY(R)	1		
	23	GV20099-002A	EJECT BUTTON(A)	1		
	24	GV20100-002A	EJECT BUTTON(B)	1		
	25	FMKW4009-002	HOLDER SPRING(A)	1		
	26	FMKW4010-002	HOLDER SPRING(B)	1		
	27	FMKW4011-001	SPRING	1	FOR EJECT LEVER	
	28	FMKS3002-003	EJECT LEVER(A)	1		
	29	FMKS3003-003	EJECT LEVER(B)	1		
	30	GV40034-001A	DAMPER ASSY	2		
	31	VKY4180-401	CASSETTE SPRING	4		
	32	----------	CASSETTE MECHA	1		
	33	FMKL4012-004	EJECT SAFETY(A)	1		
	34	FMKL4013-001	EJECT SAFETY(B)	1		
	35	FMKW4007-001	SPRING (A)	1	EJECT SAFETY(A)	
	36	FMKW4008-001	SPRING (B)	1	EJECT SAFETY(B)	
	37	GV20094-001A	HOLDER BRACKET	1		
	38	QYSBSG3010Z	T.SCREW	2	F.P.TO H.BRKT.	
	39	QYSBSG3010Z	T.SCREW	2	F.P.TO CHASS.BS	
	40	QYSBSG3010Z	T.SCREW	3	MECHA & H.BRKT.	
	41	QYSBSF3012Z	SCREW	4	MECHA & F.PANEL	
	42	GV30124-001A	TRANS SHIELD	1		
	43	E3400-431	SPACER	1	STICK AT SLC MO	
	44	----------	CD CHANGER MECHA	1		
	45	----------	CD MECHA	1		
	46	LV40761-003A	INSULATOR	2		
	47	LV40761-003A	INSULATOR	2		
	48	VKS3703-00L	CLAMPER ASS'Y	1		

■ Parts list (General assembly)

Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	49	QYSPST2606Z	SCREW	1		
	50	VKW5187-001	ROD	1		
	51	QUQ610-1509AJ	FFC WIRE	1		
	52	VDM1001-M002AV	WIRE & TUBE	1		
	53	QYSBSF2608Z	T.SCREW	4		
	54	VYSA1R2-033	SPACER	1	FOR VDM1001-M00	
	55	E309662-001SM	DISC STOPPER	1		
	56	QYSBSF3008Z	SCREW	1	FOR DISC STOPPE	
	57	QYSBSF3008Z	SCREW	1	FOR LOD STOPPER	
	58	GV40189-001A	FAN BRACKET	1		
	59	QYSBSF3010Z	SCREW	2	FAN BRKT/CD MEC	
	60	QYSBSG3035Z	T.SCREW	2	FAN TO FAN BRAC	
	61	FMYH4004-001	PLASTIC RIVET	1	TUNER BRD.+ FMC	
	62	GV10061-001A	CHASSIS BASE	1		
	63	E75896-006	FELT SPACER	2	CHASS BASE FOOT	
	64	GV30191-002A	HEAT SINK	1		
	65	GV40178-001A	HEAT SINK BRKT.	2		
	66	QYSBSG3014E	T.SCREW	4	FOR POWER IC	
	67	GV40143-001A	LEAF SPRING	1		
	68	QYSBSG3014E	T.SCREW	2	FOR LEAF SPRING	
	69	QYSDSTL4008Z	SPECIAL SCREW	4	FOR TRANS/CH.BS	
	70	QYSBSGG3008E	T.SCREW	2	FMH BRD./CH.BS	
	71	QYSBSGG3008E	T.SCREW	1	FMC BRD./CH.BS	
	72	QZW0033-001	STRAIN RELIEF	1		
⚠	73	QMF51U1-5R0-J8	FUSE	1	F001	
⚠	74	QMF51U1-6R0-J8	FUSE	1	F101	
⚠	75	QMF51U1-6R0-J8	FUSE	1	F102	
	76	VKZ4001-110S	WIRE HOLDER	1		
⚠	77	QQT0319-001	TRANSFORMER	1	T001	
	78	QUQ110-1908BJ	FFC WIRE	1	FMC TO VC3	
	79	QUQ412-0911DJ	CARD WIRE	1	FMC TO TUNER	
	80	QUQ412-1710CJ	FFC WIRE	1	FMB TO FMC(1)	
	81	QUQ412-1710CJ	FFC WIRE	1	FMB TO FMC(2)	
	82	QUQ412-1020CJ	FFC WIRE	1	FMC TO SLC	
	83	QUQ412-0915CJ	FFC WIRE	1	FMB TO SLC	
	84	QUQ412-2210CJ	CARD WIRE	1	FMB TO SW	
⚠	85	QMPD380-200-JN	POWER CORD	1		
	86	GV10062-001A	REAR PANEL	1		
	87	GV10063-002A	REAR COVER	1		
	88	QYSBSG3010Z	T.SCREW	2	C3 MECHA/S.BRKT	
	89	QAR0177-001	FAN	1	SUPPLIER NIDEC	
	90	QYSBSGY3008E	SPECIAL SCREW	1	REAR PNL/CHAS.B	
	91	QYSBSGY3008E	SPECIAL SCREW	4	REAR PNL/ H.SIN	
	92	QYSBSGY3008E	SPECIAL SCREW	1	REAR PNL/ AUX	
	93	QYSBSGY3008E	SPECIAL SCREW	2	C3/ REAR PANEL	
	94	QYSBSGY3008E	SPECIAL SCREW	2	SPK/ REAR PANEL	
	95	QYSBSGY3008E	SPECIAL SCREW	2	TUNER/REAR PANE	
	96	QYSBSGY3008E	SPECIAL SCREW	1	REAR CVR/R.PNL	

■ Parts list (General assembly)

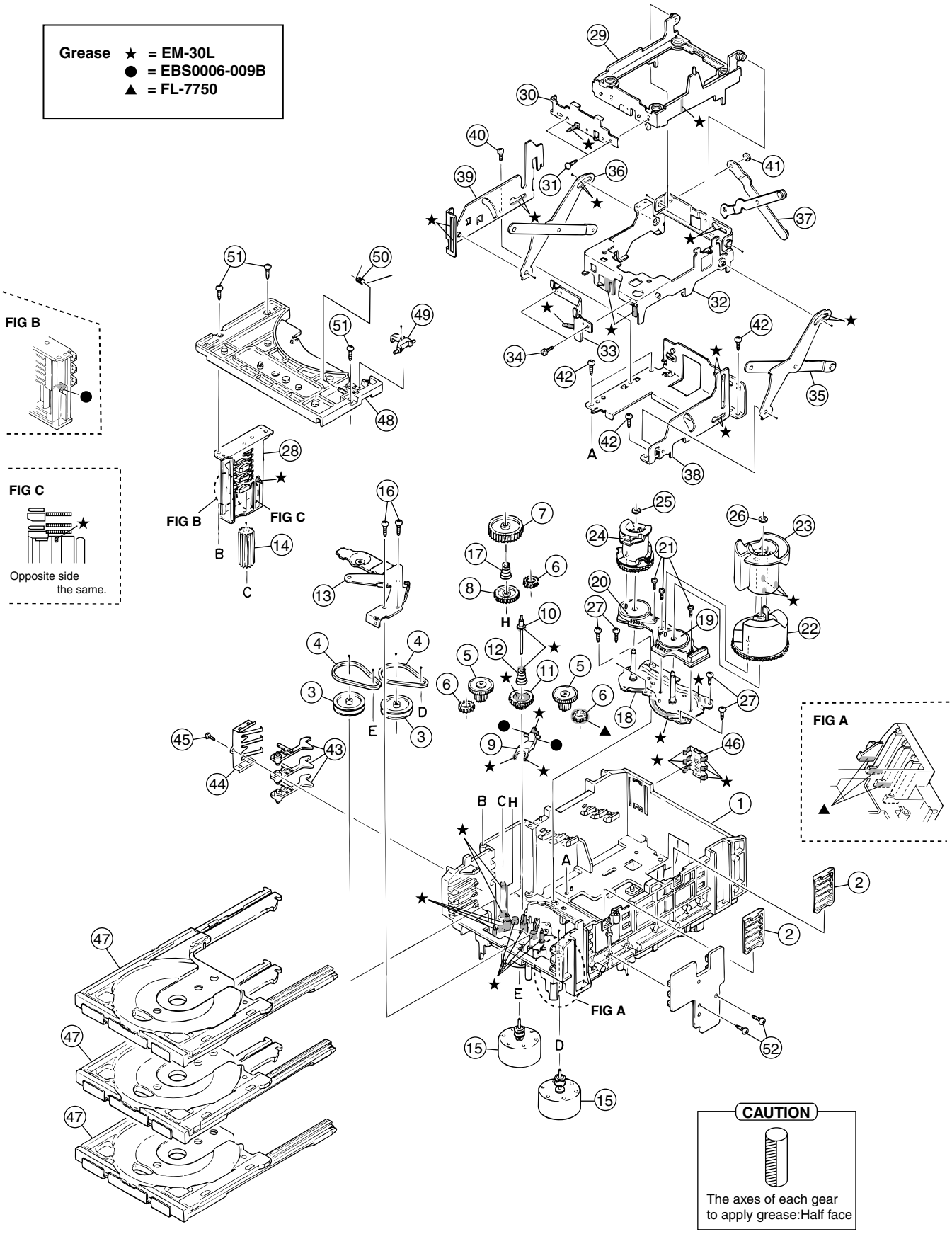
Block No. M1MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	97	QYSBSGY3008E	SPECIAL SCREW	1	OPTICAL/R.PANEL	
	98	GV10055-001A/S/	METAL COVER	1		
	99	QYSDSG3006M	T.SCREW	2	M.COVER/C.BASE	
	100	QYSBSGY3008E	SPECIAL SCREW	6	M.COVER/R.PANEL	
	101	GV20106-005A	CD FITTING	1	DISC 1	
	102	GV20107-005A	CD FITTING	1	DISC 2	
	103	GV20108-005A	CD FITTING	1	DISC 3	
	104	GV30179-001A	VOLUME KNOB ASS	1		
	105	GV30180-001A	SUB.WFR.KB.ASSY	1		
	106	GV30181-001A	SND.MODE KB.ASS	1		
	107	GV30182-001A	CD.FWD.KB.ASSY	1		
	108	GV20098-001A	WINDOW SCREEN	1		
	109	GV40181-001A	MIRROR SHEET	1		
	110	GV30155-002A	VOLUME RING	1		
	111	GV30151-002A	SUB.WOOFER RING	1		
	112	GV30152-002A	SOUND MODE RING	1		
	113	GV30153-002A	CD FORWARD RING	1		
	114	GV40186-001A	NUT	1	FOR VOLUME ENCO	
	115	GV30141-001A	DISPLAY HOLDER	1		
	116	E3400-439	FELT SPACER	2		

CD changer mechanism assembly and parts list

C3BASE-1M

Block No. M 2 M M



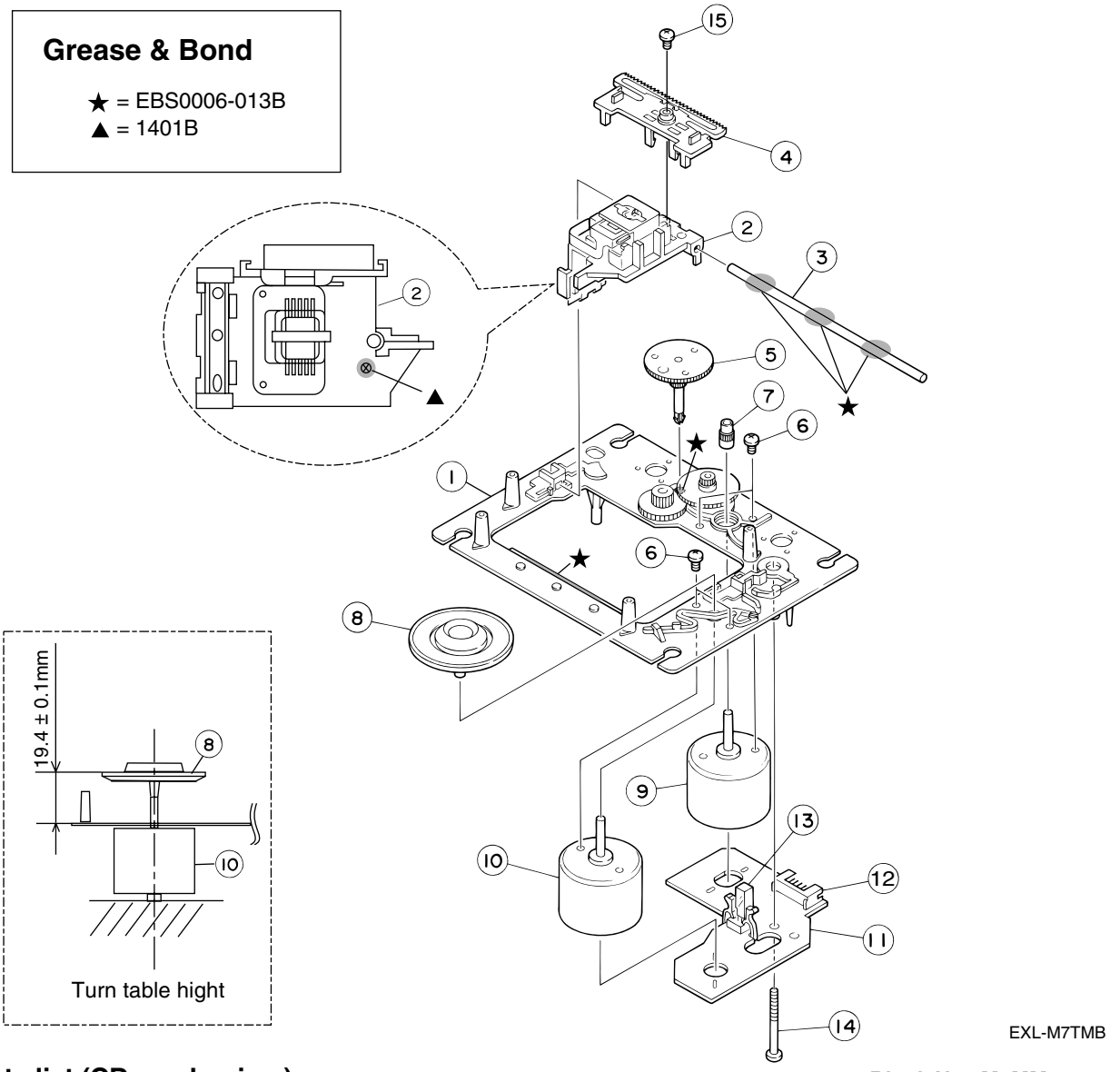
■ Parts list (CD changer mechanism)

Block No. M2MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	VKS1144-004	CHASSIS	1		
	2	VKS3698-003	TRAY GUIDE	2		
	3	VKS5532-003	PULLEY GEAR	2		
	4	VKB3000-164	BELT	2		
	5	VKS5505-003	GEAR B	2		
	6	VKS5506-002	GEAR C	3		
	7	VKS5507-002	CROSS GEAR U	1		
	8	VKS5508-002	CROSS GEAR L	1		
	9	VKS5510-003	SELECT LEVER	1		
	10	VKH5769-001	S.G.SHAFT	1		
	11	VKS5511-002	SELECT GEAR	1		
	12	VKW5155-003	COMP.SPRING	1	FOR SELECT GEAR	
	13	VKM3846-003	GEAR BRACKET	1		
	14	VKS5509-002MM	CYLINDER GEAR	1		
	15	MSN5D257A-SA2	D.C.MOTOR ASS'Y	2		
	16	QYSPSPD2616Z	SCREW	2	FOR MOTOR	
	17	LV40612-001A	COMP.SPRING	1		
	18	VKM3825-00B	C.G.BASE ASS'Y	1		
	19	VKZ3172-00ASS	CAM SW. R ASS'Y	1		
	20	VKZ3173-00ASS	CAM SW. L ASS'Y	1		
	21	QYSPST2606Z	SCREW	3	FOR CAM SW.	
	22	VKS2263-002MM	CAM R1	1		
	23	VKS2264-002MM	CAM R2	1		
	24	VKS2265-002MM	CAM GEAR L	1		
	25	WDL316050MM	SLIT WASHER	1	FOR CAM GEAR L	
	26	WDL316050MM	SLIT WASHER	1		
	27	QYSBSF2608Z	T.SCREW	4	FOR C.GEAR BASE	
	28	VKS3702-00FMM	DRIVE UNIT	1		
	29	VKS2247-004	MECHA HOLDER A	1		
	30	VKL7767-00D	BRACKET ASS'Y	1		
	31	QYSBSF2606Z	SCREW	2	FOR BRACKET	
	32	VKM3860-00C	M.HOLDER B AS'Y	1		
	33	VKL7802-00D	M.HOLDER C AS'Y	1		
	34	QYSDST2604Z	SCREW	2	FOR M.HOLDER C	
	35	VKL7810-00B	LIFTER ASS'Y R	1		
	36	VKL7811-00B	LIFTER ASS'Y L	1		
	37	VKL7812-00B	LIFTER ASS'Y H	1		
	38	VKL2732-003	LIFTER BASE	1		
	39	VKM3857-002	LIFTER BRACKET	1		
	40	QYSDST2604Z	SCREW	1		
	41	WDL266035-2	SLIT WASHER	1		
	42	QYSBSF2608Z	T.SCREW	4		
	43	VKS5514-002MM	LOCK LEVER	3		
	44	VKY3133-002MM	RETURN SPRING	1		
	45	QYSBSF2608Z	T.SCREW	1	FOR RETURN SP.	
	46	VKY3134-003MM	CLICK SPRING	1		
	47	VKS2252-00L	TRAY ASS'Y	3		
	48	VKS2250-004	TOP BRACKET	1		
	49	VKS5515-002	S.TRAY STOPPER	1		
	50	VKW5156-004	TORSION SPRING	1		
	51	QYSBSF2608Z	T.SCREW	3		
	52	QYSBSF2608Z	T.SCREW	2		

CD mechanism assembly and parts list

Block No. M 3 M M



■ Parts list (CD mechanism)

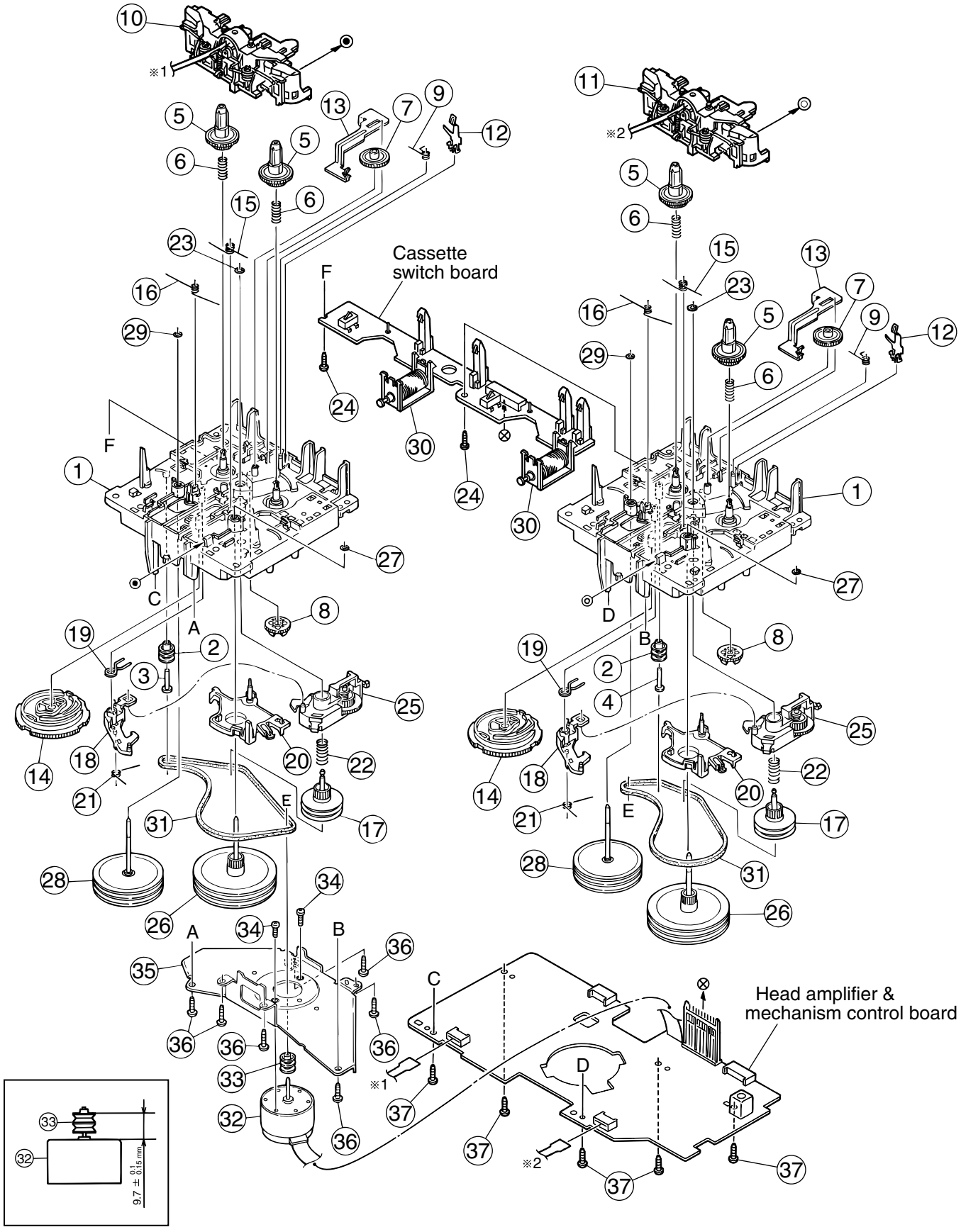
Block No. M3MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	E102731-221SM	CD MECHA BASE A	1		
	2	OPTIMA-7B	CD PICK	1		
	3	E406777-002SM	CD SHAFT	1		
	4	LV31002-001A	CD RACK	1		
	5	E307745-441SM	CD GEAR 3	1		
	6	QYSDSP2003N	SCREW	4		
	7	E406750-442SM	PINION	1		
	8	EPB309173PKA	T.T PACKING	1		
	9	E406784-001	FEED MOTOR	1		
	10	QAR0130-001	SP MOTOR	1		
	11	EMW10190-441	CIR BOARD	1		
	12	QGA2001F1-06	6P PLUG ASSY	1		
	13	QSW0506-001	LEAF SW	1		
	14	E75832-221SS	SPECIAL SCREW	1		
	15	QYSDSF2606Z	SCREW	1		

Cassette mechanism assembly and parts list

Block No. M 4 M M

SLC-W101M



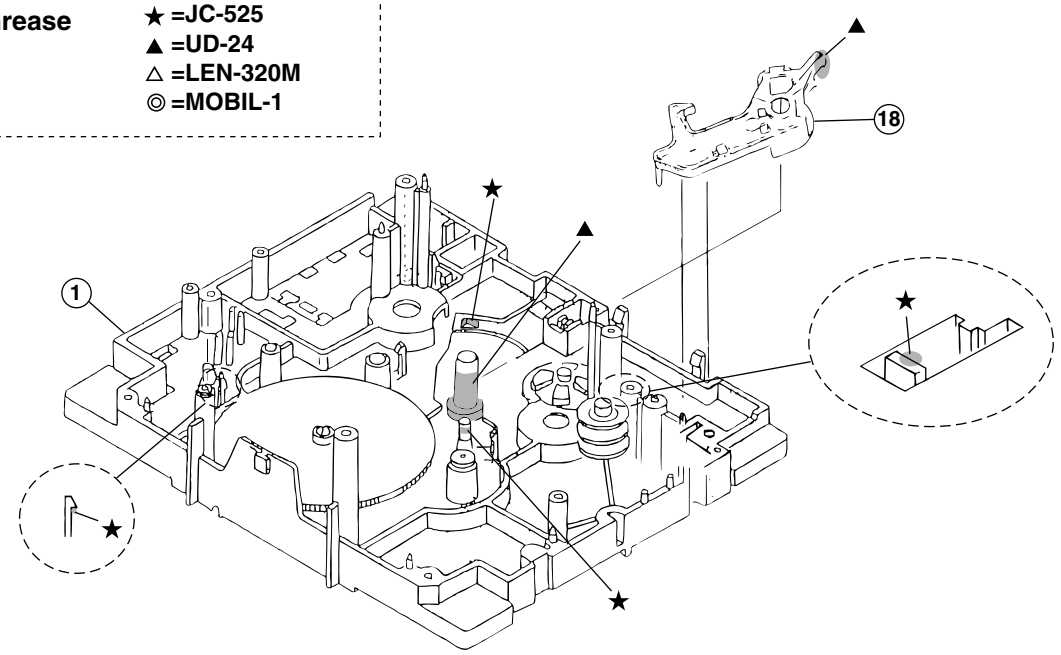
■ Parts list (Cassette mechanism)

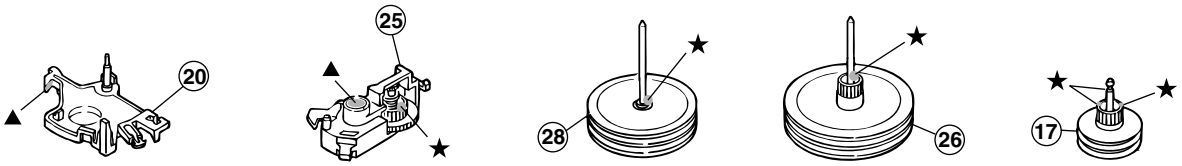
Block No. M4MM

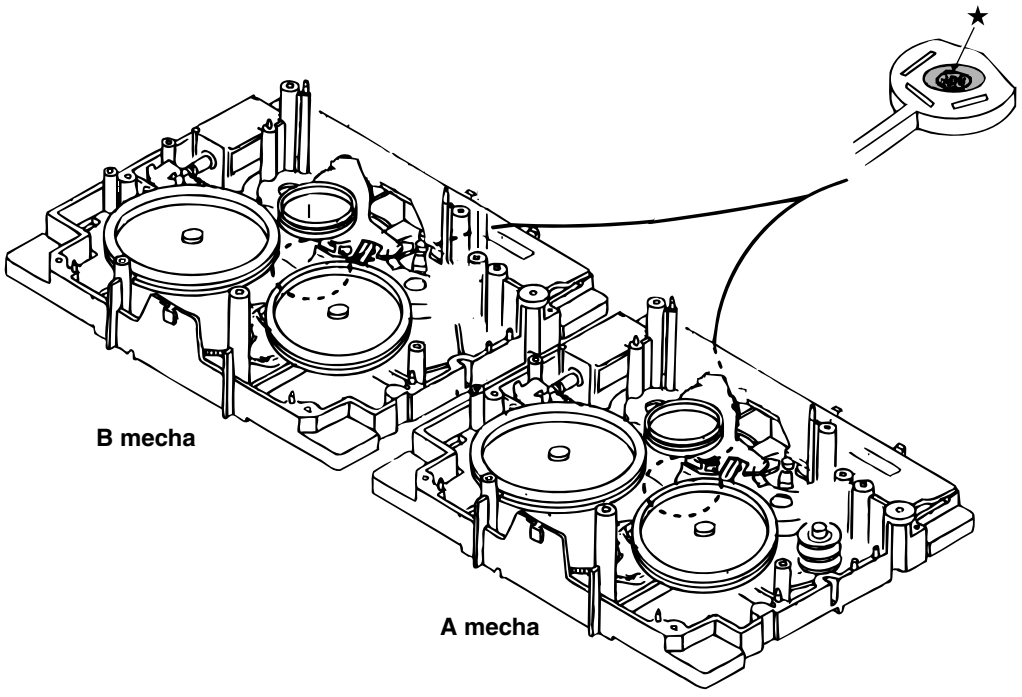
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	1	VKS1165-00K	MECHA CHASSIS	2		
	2	VKR4749-003	IDLER PULLEY	2		
	3	LV42026-001A	SHAFT	1	A MECHA	
	4	VKH5786-003	SHAFT	1	B MECHA	
	5	VKS2274-002	REEL GEAR	4		
	6	VKW5286-002	B.T. SPRING	4		
	7	VKS5559-001	PLAY IDLE GEAR	2		
	8	VKS5597-00B	FR GEAR	2		
	9	VKW5296-001	EARTH SPRING	2		
	10	SLC-P1SVM	HEAD MOUNT ASSY	1	A MECHA	
	11	SLC-RP1SVM	HEAD MOUNT ASSY	1	B MECHA	
	12	VKY3149-002	CASSETTE SP.	2		
	13	VKM3906-003	PLAY SW LEVER	2		
	14	VKS1166-003	CONTROL CAM	2		
	15	VKW5279-001	HEAD BASE SP(R)	2		
	16	VKW5280-001	HEAD BASE SP(L)	2		
	17	VKS5603-00G	MAIN PULLEY ASY	2		
	18	VKS3785-001MM	FR ARM	2		
	19	VKW5284-002	SWING SPRING	2		
	20	VKS2278-003	TRIGGER ARM	2		
	21	VKW5301-001	FR SPRING	2		
	22	VKW5266-001	ELEVATOR SPRING	2		
	23	WDL214025	WASHER	2		
	24	QYSBSF2005Z	T.SCREW	2		
	25	VKS3786-00G	CLUTCH ASS'Y	2		
	26	VKF3205-00B	F.WHEEL ASSY(R)	2		
	27	WDL183425	SLIT WASHER	2		
	28	VKF3207-00B	F.WHEEL ASSY(L)	2		
	29	WDL173525-6	SLIT WASHER	2		
	30	VKZ3174-00A	DC SOLENOID	2		
	31	VKB3000-182	CAPSTAN BELT(B)	2		
	32	MSI-5U2LWA	D.C.MOTOR ASS'Y	1		
	33	VKR4761-001	MOTOR PULLEY	1		
	34	QYSPSP2604Z	SCREW	2		
	35	VKM3907-001	JOINT BRACKET	1		
	36	QYSBSF2608Z	T.SCREW	6		
	37	QYSBSF2608Z	T.SCREW	5	FOR P.W.B.	

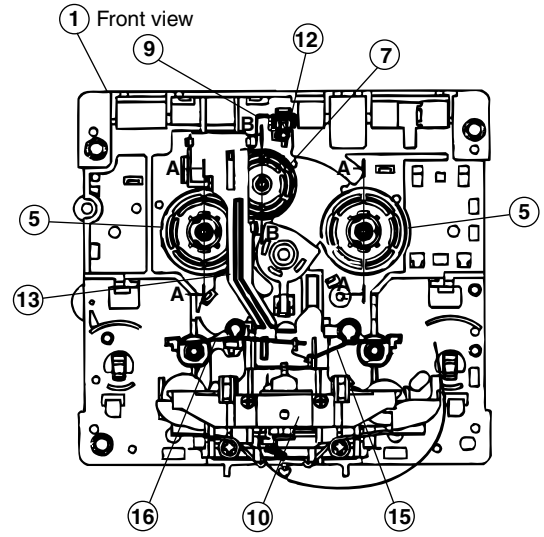
Grease point

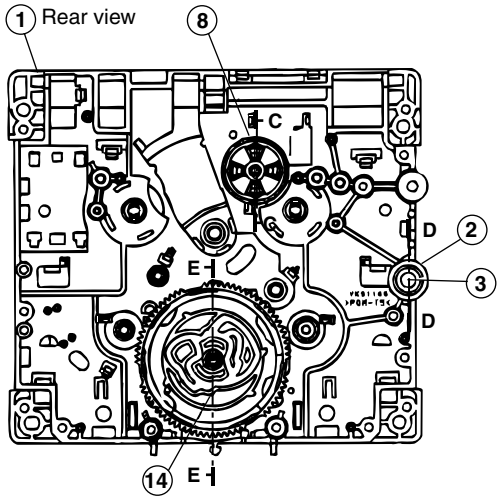
Grease	★ =JC-525 ▲ =UD-24 △ =LEN-320M ◎ =MOBIL-1

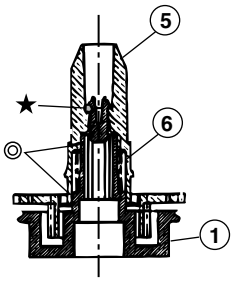




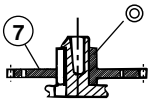




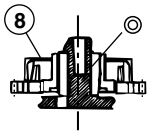




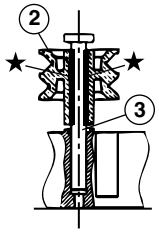
A - A (2/1, 2 places)



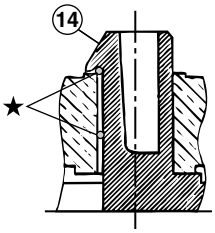
B - B (2/1)



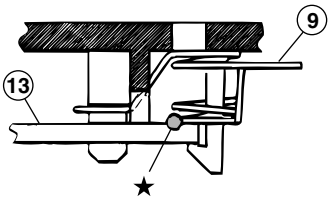
C - C (2/1)

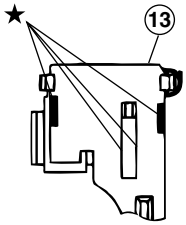


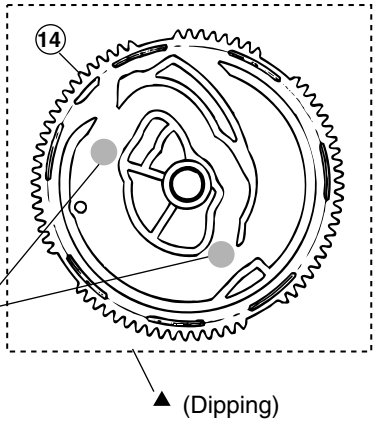
D - D (2/1)



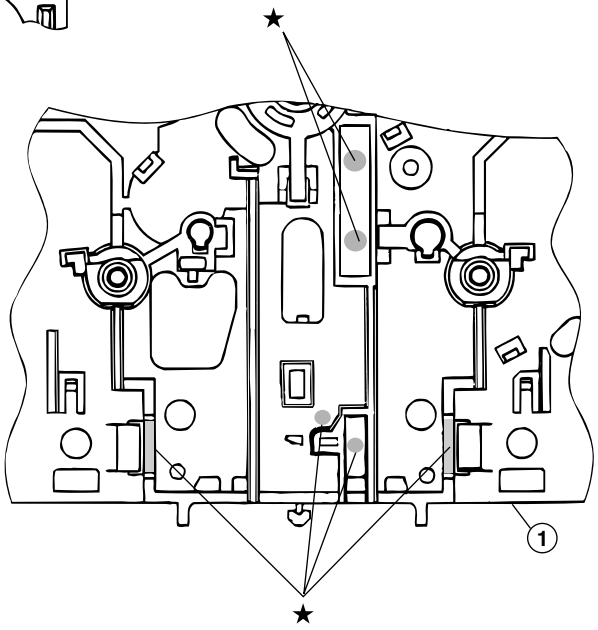
E - E (5/1)







▲ (Dipping)



■ **Electrical parts list (Regulator & amplifier board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 201	QFV72AJ-104Z	MF CAPACITOR	.10MF 5% 100V	
	C 202	QFV72AJ-104Z	MF CAPACITOR	.10MF 5% 100V	
	C 203	QFV72AJ-104Z	MF CAPACITOR	.10MF 5% 100V	
	C 204	QEZ0510-478	E CAPACITOR	4700MF	
	C 205	QEZ0510-478	E CAPACITOR	4700MF	
	C 211	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C 212	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C 213	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C 214	EETB1HM-228JC	E CAPACITOR		
	C 215	EETB1HM-228JC	E CAPACITOR		
	C 216	QETN1VM-107Z	E CAPACITOR	100MF 20% 35V	
	C 217	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 218	EETC1HM-226ZJC	E CAPACITOR		
	C 219	QDYB1CM-103Y	C CAPACITOR		
	C 220	EETC1HM-226ZJC	E CAPACITOR		
	C 221	EETC1HM-475ZJC	E CAPACITOR		
	C 222	EETC1HM-475ZJC	E CAPACITOR		
	C 223	EETC1HM-226ZJC	E CAPACITOR		
	C 253	EETB1EM-338JC	E CAPACITOR		
	C 280	EETC1HM-224ZJC	E CAPACITOR		
	C 281	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 372	EETC1HM-226ZJC	E CAPACITOR		
	C 373	QDYB1CM-103Y	C CAPACITOR		
	C 374	EETC1HM-226ZJC	E CAPACITOR		
	C 601	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 602	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 603	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 604	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 605	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 606	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 607	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 608	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 609	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 610	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 611	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 612	QETN1HM-476Z	E CAPACITOR	47MF 20% 50V	
	C 613	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 614	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 615	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 616	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 621	QTE1V06-106Z	E CAPACITOR		
	C 622	QTE1V06-106Z	E CAPACITOR		
	C 623	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 624	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 639	QFLM1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 683	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C 703	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 704	QCBB1HK-471Y	C CAPACITOR	470PF 10% 50V	
	C 705	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 706	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 707	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 708	QETN1JM-476Z	E CAPACITOR	47MF 20% 63V	
	C 709	QCSB1HK-4R7Y	C CAPACITOR	4.7PF 10% 50V	
	C 710	QCSB1HK-4R7Y	C CAPACITOR	4.7PF 10% 50V	
	C 711	QFV72AJ-104Z	MF CAPACITOR	.10MF 5% 100V	
	C 712	QFV72AJ-104Z	MF CAPACITOR	.10MF 5% 100V	
	C 713	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 714	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 715	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 716	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 721	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 722	QETN1HM-106Z	E CAPACITOR	10MF 20% 50V	
	C 723	EETC1AM-107ZJC	E CAPACITOR		
	C 726	EETC1EM-106ZJC	E CAPACITOR		
	C 729	EETC1CM-476ZJC	E CAPACITOR		
	C 730	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 731	QCF31HZ-223Z	C CAPACITOR	.022MF +80:-20%	
	C 739	QFLM1HJ-104Z	E CAPACITOR	.10MF 5% 50V	
	C 790	EETC1EM-476ZJC	E CAPACITOR		
	C 901	QDYB1CM-103Y	C CAPACITOR		
	C 902	QDYB1CM-103Y	C CAPACITOR		
	CN201	QGB2510J1-09	CONNECTOR		
	CN202	QGB2510J1-08	CONNECTOR		
	CN204	QGA3901C1-07	7P CONNECTOR		
	CN205	QGB2510J1-14	CONNECTOR		
	CN206	QGB2510J1-10	CONNECTOR		
	CN207	QGB2510J1-10	CONNECTOR		
	CN215	QGB2510K2-14	CONNECTOR		
	CN703	QGD2504C1-03Z	SOCKET		
	CN704	QGD2504C1-03Z	SOCKET		
	CN705	QGA2501C1-02	2P CONNECTOR		
	CN706	QGD2504C1-03Z	SOCKET		
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⚠	D 202	1N5402M-20	DIODE		
⚠	D 203	1N5402M-20	DIODE		
⚠	D 204	1N5402M-20	DIODE		
⚠	D 211	1N5402M-20	DIODE		
⚠	D 212	1N5402M-20	DIODE		
⚠	D 213	1N5402M-20	DIODE		
⚠	D 214	1N5402M-20	DIODE		
⚠	D 217	1N4003S-T5	SI DIODE		
⚠	D 218	1N4003S-T5	SI DIODE		
	D 219	MTZJ33C-T2	Z DIODE		
	D 220	MTZJ9.1B-T2	ZENER DIODE		
	D 221	MTZJ5.1B-T2	ZENER DIODE		
	D 223	1SS133-T2	SI DIODE		
⚠	D 227	1N4003S-T5	SI DIODE		
⚠	D 233	2A02M	DIODE		
⚠	D 234	2A02M	DIODE		
	D 280	MTZJ2.4B-T2	Z.DIODE		
	D 369	MTZJ10C-T2	Z.DIODE		
	D 370	MTZJ11C-T2	Z.DIODE		
	D 619	1SS133-T2	SI DIODE		
	D 620	1SS133-T2	SI DIODE		
	D 622	MTZJ9.1B-T2	ZENER DIODE		
	D 703	MTZJ15C-T2	Z DIODE		
	D 704	MTZJ15C-T2	Z DIODE		
	D 719	1SS133-T2	SI DIODE		
	D 720	1SS133-T2	SI DIODE		
	D 723	MTZJ36A-T2	Z DIODE		
	D 724	MTZJ36A-T2	Z DIODE		
	D 726	1SS133-T2	SI DIODE		
	D 728	1SS133-T2	SI DIODE		
	D 790	1SS133-T2	SI DIODE		
	EP201	QNZ0136-001Z	EARTH PLATE		
	EP202	QNZ0136-001Z	EARTH PLATE		
	FW901	QUM027-13DGZ4	FLAT WIRE		
⚠	IC602	STK402-050	IC		
⚠	IC701	STK412-000	IC		
	JS901	QSW0911-001	ROTARY SWITCH		
	L 601	QQLZ005-R45	INDUCTOR		
	L 602	QQLZ005-R45	INDUCTOR		
	L 701	QQLZ005-R45	INDUCTOR		
	L 702	QQLZ005-R45	INDUCTOR		
	Q 201	KTA1023/OY/-T	TRANSISTOR		
	Q 204	KTC3199/GL/-T	TRANSISTOR		

■ **Electrical parts list (Regulator & amplifier board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 240	KTC3199/GL/-T	TRANSISTOR		
	Q 371	2SB1274/RS/	TRANSISTOR		
	Q 373	KRA104M-T	D.TRANSISTOR		
	Q 374	KRC104M-T	D.TRANSISTOR		
	Q 601	KTA1268/GL/-T	TRANSISTOR		
	Q 602	KTA1268/GL/-T	TRANSISTOR		
	Q 612	KTA1267/YG/-T	TRANSISTOR		
	Q 613	KRC102M-T	D.TRANSISTOR		
	Q 680	2SK301/PQ/-T	TRANSISTOR(FET)		
	Q 701	KTA1268/GL/-T	TRANSISTOR		
	Q 702	KTA1268/GL/-T	TRANSISTOR		
	Q 710	2SA965/OY/-T	TRANSISTOR		
	Q 711	KTC3200/GL/-T	TRANSISTOR		
	Q 712	KTA1268/GL/-T	TRANSISTOR		
	Q 713	2SC2235/OY/-T	TRANSISTOR		
	Q 726	2SC2389S/SE/-T	TRANSISTOR		
	Q 727	KTA1268/GL/-T	TRANSISTOR		
	Q 728	KTC3199/GL/-T	TRANSISTOR		
	Q 733	2SC3576-JVC-T	TRANSISTOR		
	Q 734	2SC3576-JVC-T	TRANSISTOR		
	Q 735	2SC3576-JVC-T	TRANSISTOR		
	Q 736	2SC3576-JVC-T	TRANSISTOR		
	Q 737	KRA111M-T	D.TRANSISTOR		
	Q 790	KTC3199/GL/-T	TRANSISTOR		
	Q 791	KTC3199/GL/-T	TRANSISTOR		
	Q 792	KTC3203/OY/-T	TRANSISTOR		
⚠	R 202	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
	R 203	QRE141J-752Y	C RESISTOR	7.5K 5% 1/4W	
	R 204	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 205	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 207	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 209	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 210	QRE141J-302Y	C RESISTOR	3.0K 5% 1/4W	
	R 215	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 216	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 217	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R 218	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
⚠	R 220	QRJ146J-471X	UNF C.RESISTOR	470 5% 1/4W	
	R 242	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 246	QRJ146J-1R0X	UNF C.RESISTOR	1.0 5% 1/4W	
⚠	R 247	QRJ146J-1R0X	UNF C.RESISTOR	1.0 5% 1/4W	
⚠	R 248	QRJ146J-1R0X	UNF C.RESISTOR	1.0 5% 1/4W	
⚠	R 249	QRJ146J-1R0X	UNF C.RESISTOR	1.0 5% 1/4W	
	R 281	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 283	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 284	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
⚠	R 383	QRZ9005-100X	F RESISTOR	10 1/0W	
	R 384	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 385	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 389	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 601	QRJ146J-101X	UNF C.RESISTOR	100 5% 1/4W	
⚠	R 602	QRJ146J-101X	UNF C.RESISTOR	100 5% 1/4W	
	R 603	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 604	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 605	QRJ146J-122X	UNF C.RESISTOR	1.2K 5% 1/4W	
⚠	R 606	QRJ146J-122X	UNF C.RESISTOR	1.2K 5% 1/4W	
	R 607	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 608	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 613	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 614	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 615	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 616	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
	R 617	QRE141J-221Y	C RESISTOR	220 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 618	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 619	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 620	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 621	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 623	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 639	QRL01DJ-821X	OMF RESISTOR	820 5% 1/1W	
⚠	R 640	QRL01DJ-821X	OMF RESISTOR	820 5% 1/1W	
⚠	R 652	QRT01DJ-R22X	UNF.MF.RESISTOR	5% 1/1W	
⚠	R 653	QRT01DJ-R22X	UNF.MF.RESISTOR	5% 1/1W	
⚠	R 654	QRT01DJ-R22X	UNF.MF.RESISTOR	5% 1/1W	
⚠	R 655	QRT01DJ-R22X	UNF.MF.RESISTOR	5% 1/1W	
	R 666	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R 667	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 668	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R 674	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
	R 675	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 676	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 680	QRE141J-105Y	C RESISTOR	1.0M 5% 1/4W	
	R 681	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 682	QRE141J-475Y	C RESISTOR	4.7M 5% 1/4W	
⚠	R 701	QRJ146J-470X	UNF C.RESISTOR	47 5% 1/4W	
⚠	R 702	QRJ146J-470X	UNF C.RESISTOR	47 5% 1/4W	
	R 703	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 704	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 705	QRJ146J-821X	UNF C.RESISTOR	820 5% 1/4W	
⚠	R 706	QRJ146J-821X	UNF C.RESISTOR	820 5% 1/4W	
	R 707	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 708	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
⚠	R 713	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 714	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 715	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
⚠	R 716	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
	R 717	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 718	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 719	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 720	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 721	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 722	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 723	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 724	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 725	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 726	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 727	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 728	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 729	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 730	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 733	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 734	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 735	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 736	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
⚠	R 739	QRL01DJ-821X	OMF RESISTOR	820 5% 1/1W	
⚠	R 740	QRL01DJ-821X	OMF RESISTOR	820 5% 1/1W	
	R 741	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 742	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 753	QRZ0197-R22	EMIT.RESISTOR	1/1W	
	R 754	QRZ0197-R22	EMIT.RESISTOR	1/1W	
	R 761	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 762	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 766	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R 768	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 769	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
⚠	R 774	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
	R 775	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

■ **Electrical parts list (Regulator & amplifier board)** **Block No. 01**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 776	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 777	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 778	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 786	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 787	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 790	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 792	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 793	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 794	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 795	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 796	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R 797	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
⚠	R 798	QRJ146J-100X	UNF.C RESISTOR	10 5% 1/4W	
	R 908	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	S 901	QSW0674-001Z	TACT SWITCH		
	S 902	QSW0674-001Z	TACT SWITCH		

■ **Electrical parts list (Main board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 401	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 402	QCBB1HK-221Y	C CAPACITOR	220PF 10% 50V	
	C 403	FQCF31HP-103Z	D CAPACITOR		
	C 404	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 426	QDVB1EZ-223Y	C CAPACITOR		
	C 427	EETC1EM-106ZJC	E CAPACITOR		
	C 436	EETC1AM-107ZJC	E CAPACITOR		
	C 437	EETC1EM-106ZJC	E CAPACITOR		
	C 438	QDYB1CM-103Y	C CAPACITOR		
	C 439	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C 440	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C 441	QTE1V06-106Z	E CAPACITOR		
	C 442	QTE1V06-106Z	E CAPACITOR		
	C 443	EETC1HM-225ZJC	E CAPACITOR		
	C 444	EETC1HM-225ZJC	E CAPACITOR		
	C 445	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C 446	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C 447	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 448	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 453	QFLM1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 454	QFLM1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 455	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 456	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 457	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 458	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 459	QFLM1HJ-183Z	M CAPACITOR	.018MF 5% 50V	
	C 460	QFLM1HJ-183Z	M CAPACITOR	.018MF 5% 50V	
	C 461	QFLM1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 462	QFLM1HJ-562Z	M CAPACITOR	5600PF 5% 50V	
	C 481	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 482	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 483	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 484	QFLM1HJ-223Z	M CAPACITOR	.022MF 5% 50V	
	C 485	QTE1V06-106Z	E CAPACITOR		
	C 486	QTE1V06-106Z	E CAPACITOR		
	C 487	EETC1AM-107ZJC	E CAPACITOR		
	C 488	EETC1HM-105ZJC	E CAPACITOR		
	C 489	EETC1AM-107ZJC	E CAPACITOR		
	C 501	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 502	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 503	QFVJ1HJ-224Z	MF CAPACITOR	.22MF 5% 50V	
	C 504	QFLM1HJ-822Z	M CAPACITOR	8200PF 5% 50V	
	C 505	QFVJ1HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C 507	QFLM1HJ-153Z	M CAPACITOR	.015MF 5% 50V	
	C 508	QFLM1HJ-273Z	M CAPACITOR	.027MF 5% 50V	
	C 509	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 510	QETN1HM-475Z	E CAPACITOR	4.7MF 20% 50V	
	C 514	QFLM1HJ-473Z	M CAPACITOR	.047MF 5% 50V	
	C 526	EETC1AM-107ZJC	E CAPACITOR		
	C 527	QFLM1HJ-273Z	M CAPACITOR	.027MF 5% 50V	
	C 528	QFLM1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 530	QFLM1HJ-104Z	M CAPACITOR	.10MF 5% 50V	
	C 531	QFVJ1HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C 532	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 534	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 535	EETC1AM-107ZJC	E CAPACITOR		
	C 556	QETN1EM-106Z	E CAPACITOR	10MF 20% 25V	
	C 571	QETN1HM-225Z	E CAPACITOR	2.2MF 20% 50V	
	C 575	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 576	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 577	QETN1CM-476Z	E CAPACITOR	47MF 20% 16V	
	C 578	EETC1HM-105ZJC	E CAPACITOR		
	C 585	EETC1HM-105ZJC	E CAPACITOR		

⚠	Item	Parts number	Parts name	Remarks	Area
	C 586	QDXB1CM-182Y	C CAPACITOR		
	C 587	QCSB1HJ-330Y	C CAPACITOR	33PF 5% 50V	
	C 588	QDGB1HK-681Y	C CAPACITOR		
	C 589	QFLM1HJ-153Z	M CAPACITOR	.015MF 5% 50V	
	C 995	EETC1AM-107ZJC	E CAPACITOR		
	C 996	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 997	QCSB1HJ-100Y	C CAPACITOR	10PF 5% 50V	
	C 998	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	C 999	QCBB1HK-101Y	C CAPACITOR	100PF 10% 50V	
	CN 11	QGF1205F1-09	CONNECTOR		
	CN211	QGB2510K2-09	CONNECTOR		
	CN212	QGB2510K2-08	CONNECTOR		
	CN214	QJK015-071214	STK WIRE		
	CN220	QGD2504C1-03Z	SOCKET		
	CN250	QGA7901F2-02	CONNECTOR		
	CN315	QGF1205C1-10	CONNECTOR		
	CN661	QGF1016F3-19	CONNECTOR		
	CN870	QGF1205C1-17	CONNECTOR		
	CN871	QGF1205C1-17	CONNECTOR		
	C1201	QETN1AM-227Z	E CAPACITOR	220MF 20% 10V	
	C1202	QFLM1HJ-823Z	M CAPACITOR	.082MF 5% 50V	
	C1228	EETC1AM-107ZJC	E CAPACITOR		
	D 411	1SS133-T2	SI DIODE		
	D 412	1SS133-T2	SI DIODE		
	D 426	MTZJ5.1B-T2	ZENER DIODE		
	D 431	MTZJ3.9B-T2	Z DIODE		
	D 432	MTZJ3.9B-T2	Z DIODE		
	D 434	MTZJ5.1B-T2	ZENER DIODE		
	D 501	1SS133-T2	SI DIODE		
	D 502	1SS133-T2	SI DIODE		
	D 571	1SS133-T2	SI DIODE		
	D 572	1SS133-T2	SI DIODE		
	D 585	1SS133-T2	SI DIODE		
	D 592	1SS133-T2	SI DIODE		
	EP250	E409182-001SM	GRAND TERMINAL		
	FT111	QNG0020-001Z	FUSE CLIP		
	FT112	QNG0020-001Z	FUSE CLIP		
	FT511	QNG0020-001Z	FUSE CLIP		
	FT512	QNG0020-001Z	FUSE CLIP		
	FT521	QNG0020-001Z	FUSE CLIP		
	FT522	QNG0020-001Z	FUSE CLIP		
	FW401	QUM155-09Z4Z4	FLAT WIRE		
	FW714	QUM156-18DGZ4	FLAT WIRE		
	IC436	TDA7439	IC		
	IC481	BA15218	IC		
	IC501	BA15218	IC		
	IC502	BA15218	IC		
	IC526	BA15218	IC		
	IC571	BA15218	IC		
	J 411	QNN0420-001	PIN JACK		
	J 426	GP1FA550TZ	OPT TRANSMITTER		
	L 546	QQR0779-001Z	INDUCTOR		
	L 566	QQR0779-001Z	INDUCTOR		
	Q 401	2SC3576-JVC-T	TRANSISTOR		
	Q 402	2SC3576-JVC-T	TRANSISTOR		
	Q 481	2SC3576-JVC-T	TRANSISTOR		
	Q 482	2SC3576-JVC-T	TRANSISTOR		
	Q 483	KRA102M-T	D.TRANSISTOR		
	Q 556	2SC3576-JVC-T	TRANSISTOR		
	Q 557	2SC3576-JVC-T	TRANSISTOR		
	Q 562	2SC3576-JVC-T	TRANSISTOR		
	Q 571	2SC2785/FE/-T	TRANSISTOR		
	Q 572	2SC2785/FE/-T	TRANSISTOR		

■ **Electrical parts list (Main board)** **Block No. 02**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 573	2SC2785/FE/-T	TRANSISTOR		
	Q 585	KTC3199/GL/-T	TRANSISTOR		
	Q 586	KTC3199/GL/-T	TRANSISTOR		
	Q 999	KRA102M-T	D.TRANSISTOR		
	R 401	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 402	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 403	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 404	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 405	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 406	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 407	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 411	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 412	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 413	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R 414	QRE141J-683Y	C RESISTOR	68K 5% 1/4W	
	R 426	QRE141J-560Y	C RESISTOR	56 5% 1/4W	
	R 431	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R 432	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
⚠	R 434	QRJ146J-4R7X	UNF C.RESISTOR	4.7 5% 1/4W	
	R 435	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 436	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 437	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 438	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 439	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 440	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 441	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 442	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 443	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 444	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 485	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 486	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 487	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 488	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 489	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R 490	QRE141J-682Y	C RESISTOR	6.8K 5% 1/4W	
	R 491	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 492	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 493	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 494	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 495	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 496	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 498	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 501	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 502	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R 503	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R 504	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 505	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 506	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 507	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R 508	QRE141J-274Y	C RESISTOR	270K 5% 1/4W	
	R 510	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 511	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 512	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R 513	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R 517	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 518	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 519	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 523	QRE141J-822Y	C RESISTOR	8.2K 5% 1/4W	
	R 524	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 526	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 528	QRE141J-182Y	C RESISTOR	1.8K 5% 1/4W	
	R 529	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 530	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 531	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 532	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 534	QRE141J-184Y	C RESISTOR	180K 5% 1/4W	
	R 536	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	
	R 537	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 541	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 557	QRE141J-123Y	C RESISTOR	12K 5% 1/4W	
	R 558	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R 560	QRE141J-303Y	C RESISTOR	30K 5% 1/4W	
	R 562	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 563	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 564	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R 571	QRE141J-271Y	C RESISTOR	270 5% 1/4W	
	R 572	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 575	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 576	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 577	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 579	QRE141J-823Y	C RESISTOR	82K 5% 1/4W	
	R 580	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 581	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R 582	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 583	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 585	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R 586	QRE141J-225Y	C RESISTOR	2.2M 5% 1/4W	
	R 587	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 588	QRE141J-220Y	C RESISTOR	22 5% 1/4W	
	R 994	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 995	QRE141J-333Y	C RESISTOR	33K 5% 1/4W	
	R 997	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 998	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 999	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
⚠	R1001	QRZ9044-335	COMP.RESISTOR	3.3M 1/0W	
⚠	R1002	ERX12SJR33E	UNF.C RESISTOR		
	R1202	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R1203	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

■ **Electrical parts list (Front board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 233	QFVJ1HJ-104Z	MF CAPACITOR	.10MF 5% 50V	
	C 308	EETC1HM-106ZJC	E CAPACITOR		
	C 310	EETC1HM-106ZJC	E CAPACITOR		
	C 312	EETC1HM-106ZJC	E CAPACTOR		
	C 360	EETC1CM-476ZJC	E SWITCH		
	C 361	QDYB1CM-103Y	C CAPACITOR		
	C 362	EETC1HM-226ZJC	E CAPACITOR		
	C 801	FQCF31HP-103Z	D.CAPACITOR		
	C 803	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 804	QETN0JM-477Z	E CAPACITOR	470MF 20% 6.3V	
	C 805	QDGB1HK-102Y	C CAPACITOR		
	C 808	QCSB1HJ-330Y	C CAPACITOR	33PF 5% 50V	
	C 809	QCSB1HJ-330Y	C CAPACITOR	33PF 5% 50V	
	C 815	EETC1HM-226ZJC	E CAPACITOR		
	C 816	EETC1CM-476ZJC	E CAPACITOR		
	C 817	EETC1HM-226ZJC	E CAPACITOR		
	C 820	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C 821	QDYB1CM-103Y	C CAPACITOR		
	C 823	QFVJ1HJ-334Z	M CAPACITOR	.33MF 5% 50V	
	C 831	QDYB1CM-103Y	C CAPACITOR		
	C 832	QDYB1CM-103Y	C CAPACITOR		
	C 835	QDGB1HK-102Y	C CAPACITOR		
	C 836	EETC1EM-106ZJC	E CAPACITOR		
	C 837	EETC1AM-107ZJC	E CAPACITOR		
	C 838	QDGB1HK-102Y	C CAPACITOR		
	C 862	EETC1HM-226ZJC	E CAPACITOR		
	C 872	EETC1HM-224ZJC	E CAPACITOR		
	C 889	EETC1HM-475ZJC	E CAPACITOR		
	C 935	QDYB1CM-103Y	C CAPACITOR		
	C 956	QDYB1CM-103Y	C CAPACITOR		
	C 957	QDYB1CM-103Y	C CAPACITOR		
	C 960	QDYB1CM-103Y	C CAPACITOR		
	C 961	QDYB1CM-103Y	C CAPACITOR		
	C 962	QDYB1CM-103Y	C CAPACITOR		
	C 963	QDYB1CM-103Y	C CAPACITOR		
	CN216	QGB2510K2-10	CONNECTOR		
	CN217	QGB2510K2-10	CONNECTOR		
	CN316	QGF1210G1-09	CONNECTOR		
	CN860	QGF1205F1-17	CONNECTOR		
	CN861	QGF1205F1-17	CONNECTOR		
	CN880	QGF1210G1-22	FFC SOCKET ASSY		
	CN890	QGF1205F1-22	CONNECTOR		
	CN911	QGD2503F1-07	SOCKET		
	C1004	QDGB1HK-102Y	C CAPACITOR		
	C1005	QDGB1HK-102Y	C CAPACITOR		
	C1006	QDGB1HK-102Y	C CAPACITOR		
	C1070	QDXB1CM-222Y	C CAPACITOR		
	D 313	MTZJ8.2B-T2	DIODE		
	D 314	MTZJ13B-T2	Z DIODE		
	D 315	MTZJ9.1B-T2	ZENER DIODE		
	D 360	MTZJ5.1B-T2	ZENER DIODE		
	D 361	MTZJ11C-T2	Z.DIODE		
	D 362	MTZJ6.8C-T2	Z DIODE		
	D 650	1SS133-T2	SI DIODE		
	D 725	1SS133-T2	SI DIODE		
	D 801	1N4003S-T5	SI DIODE		
	D 803	1SS119-02-T2	SI DIODE		
	D 804	1SS133-T2	SI DIODE		
	D 805	1SS133-T2	SI DIODE		
	D 807	1N4003S-T5	SI DIODE		
	D 812	1SS133-T2	SI DIODE		
	D 831	MTZJ5.1B-T2	ZENER DIODE		
	D 832	MTZJ5.1B-T2	ZENER DIODE		

⚠	Item	Parts number	Parts name	Remarks	Area
	D 860	1SS133-T2	SI DIODE		
	D 918	SLA-362LT-T	LED		
	D 919	SLA-362LT-T	LED		
	D 920	SLA-362LT-T	LED		
	D 940	L-914SRD-T	LED		
	D 941	L-914SRD-T	LED		
	D 942	L-914SRD-T	LED		
	D 943	L-914SRD-T	LED		
	D 944	L-914SRD-T	LED		
	D 945	L-914SRD-T	LED		
	D 953	L-914SRD-T	LED		
	D 954	L-914SRD-T	LED		
	D 962	SLA-362LT-T	LED		
	D 964	1SS133-T2	SI DIODE		
	D1003	MTZJ2.4B-T2	Z.DIODE		
	FL801	QLF0081-001	FL TUBE		
	FW230	QUM153-11DGZ4	FLAT WIRE		
	FW713	QUM023-33DGZ4	FLAT WIRE		
	FW915	QUM027-18Z4Z4	FLAT WIRE		
⚠	IC303	KIA7808API	IC		
⚠	IC304	KIA7812API	IC		
⚠	IC305	KIA7809API	IC		
	IC810	MN101C35DEC2	IC		
	IC811	BU2092	IC		
	IC830	KIA7042AP-T	IC		
	IC951	GP1U271X	RM RECIVER		
	J 81	QNB0107-001	SPK TERMINAL		
	JS956	QSW0912-001	ROTALY SWITCH	S/WOOFER VOL	
	JS960	QSW0911-001	ROTALY SWITCH	S/MODE VOL	
	JS962	QSW0862-001	ROTALY SWITCH	MAIN VOL	
	J1001	QNS0183-001	PHONE JACK	HEAD PHONE	
	L 801	QQL29BJ-100Z	INDUCTOR		
	L 802	QQL231K-220Y	INDUCTOR		
	L 803	QQL29BJ-100Z	INDUCTOR		
	L 805	QQL29BJ-100Z	INDUCTOR		
	L 806	QQL29BJ-100Z	INDUCTOR		
	L 813	QQR0779-001Z	INDUCTOR		
	L1003	QQL231K-2R2Y	INDUCTOR		
⚠	Q 360	2SD2395/EF/	TRANSISTOR		
	Q 361	KTC3199/GL/-T	TRANSISTOR		
	Q 362	KTC3199/GL/-T	TRANSISTOR		
	Q 809	2SD1991A/RS/-T	TRANSISTOR		
	Q 810	2SD1991A/RS/-T	TRANSISTOR		
	Q 811	2SD1991A/RS/-T	TRANSISTOR		
	Q 812	2SD1991A/RS/-T	TRANSISTOR		
	Q 813	2SD1991A/RS/-T	TRANSISTOR		
	Q 816	2SD1991A/RS/-T	TRANSISTOR		
	Q 817	2SD1991A/RS/-T	TRANSISTOR		
	Q 843	KRA102M-T	D.TRANSISTOR		
	Q 858	2SD1991A/RS/-T	TRANSISTOR		
	Q 860	KTC3199/GL/-T	TRANSISTOR		
	Q 875	KRC102M-T	D.TRANSISTOR		
	Q 877	KRA102M-T	D.TRANSISTOR		
	Q 878	KRC102M-T	D.TRANSISTOR		
	Q 879	2SD1991A/RS/-T	TRANSISTOR		
	Q 890	2SD1991A/RS/-T	TRANSISTOR		
	Q 905	KRC104M-T	D.TRANSISTOR		
	Q 906	KRC104M-T	D.TRANSISTOR		
	Q 907	KRC102M-T	D.TRANSISTOR		
	Q 908	KRA102M-T	D.TRANSISTOR		
	Q 918	KRC102M-T	D.TRANSISTOR		
	Q 919	KRC102M-T	D.TRANSISTOR		
	Q 920	KRC102M-T	D.TRANSISTOR		

■ **Electrical parts list (Front board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	Q 940	KTA1267/YG/-T	TRANSISTOR		
	Q 941	KTA1267/YG/-T	TRANSISTOR		
	Q 953	KTA1267/YG/-T	TRANSISTOR		
	Q 954	KTA1267/YG/-T	TRANSISTOR		
	Q 961	KRA102M-T	D.TRANSISTOR		
	R 151	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 233	QRK126J-470X	C RESISTOR	47 5% 1/2W	
	R 234	QRK126J-470X	C RESISTOR	47 5% 1/2W	
⚠	R 302	QRJ146J-2R2X	UNF C.RESISTOR	2.2 5% 1/4W	
⚠	R 303	ERX12SJR33E	UNF C.RESISTOR		
⚠	R 306	QRK126J-2R2X	C RESISTOR	2.2 5% 1/2W	
⚠	R 307	QRK126J-2R2X	C RESISTOR	2.2 5% 1/2W	
⚠	R 360	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
⚠	R 361	QRZ9006-4R7X	F RESISTOR	4.7 1/0W	
	R 362	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 363	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 364	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 365	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 366	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 367	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 368	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 801	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 807	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 808	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 810	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 811	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 812	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 813	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 814	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 815	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 816	QRE141J-563Y	C RESISTOR	56K 5% 1/4W	
	R 817	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 818	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 819	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 820	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 821	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 822	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 823	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 824	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 825	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 826	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 827	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 828	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 829	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 831	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 832	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 833	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 834	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 835	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 836	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 837	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 838	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 839	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 840	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 841	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 842	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 844	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 845	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 846	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 847	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 848	QRE141J-331Y	C RESISTOR	330 5% 1/4W	
	R 849	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 850	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	

⚠	Item	Parts number	Parts name	Remarks	Area
	R 851	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 854	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 855	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 856	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 857	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 858	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 859	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 860	QRE141J-684Y	C RESISTOR	680K 5% 1/4W	
	R 861	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 862	QRE141J-220Y	C RESISTOR	22 5% 1/4W	
	R 864	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 865	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 866	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 867	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 868	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 869	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 870	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 871	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 872	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 873	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 874	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 876	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 879	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 880	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 881	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 882	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 883	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 884	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 885	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 886	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 887	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 888	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 889	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R 890	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 891	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 893	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 894	QRE141J-753Y	C RESISTOR	75K 5% 1/4W	
	R 895	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 897	QRE141J-753Y	C RESISTOR	75K 5% 1/4W	
	R 902	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 905	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 906	QRE141J-104Y	C RESISTOR	100K 5% 1/4W	
	R 911	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 912	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 916	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 917	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 918	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 919	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 920	QRE141J-201Y	C RESISTOR	200 5% 1/4W	
	R 921	QRE141J-334Y	C RESISTOR	330K 5% 1/4W	
	R 930	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 931	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 932	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 933	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 935	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 936	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 937	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 938	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 939	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 940	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R 941	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R 942	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 943	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	

■ **Electrical parts list (Front board)** **Block No. 03**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 944	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 945	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 946	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 947	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 948	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 949	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 950	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R 952	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 953	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R 954	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R 955	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 961	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 962	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 963	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R 964	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R 965	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R 969	QRE141J-680Y	C RESISTOR	68 5% 1/4W	
	R 970	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R 980	QRE141J-100Y	C RESISTOR	10 5% 1/4W	
	R 991	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 992	QRE141J-202Y	C RESISTOR	2.0K 5% 1/4W	
	R 993	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R 994	QRE141J-753Y	C RESISTOR	75K 5% 1/4W	
	R 995	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R 996	QRE141J-272Y	C RESISTOR	2.7K 5% 1/4W	
	R 997	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R 998	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	RA801	QRB169J-104	R.NETWORK	100K 5% 1/6W	
	RA802	QRB169J-104	R.NETWORK	100K 5% 1/6W	
	RY 1	QSK0109-001	RELAY		
	RY 2	QSK0109-001	RELAY		
	S 915	QSW0674-001Z	TACT SWITCH	DISC 1	
	S 916	QSW0674-001Z	TACT SWITCH		
	S 917	QSW0674-001Z	TACT SWITCH		
	S 931	QSW0674-001Z	TACT SWITCH	DUBBING	
	S 932	QSW0674-001Z	TACT SWITCH		
	S 933	QSW0674-001Z	TACT SWITCH		
	S 935	QSW0674-001Z	TACT SWITCH		
	S 936	QSW0674-001Z	TACT SWITCH		
	S 937	QSW0674-001Z	TACT SWITCH		
	S 938	QSW0674-001Z	TACT SWITCH		
	S 939	QSW0674-001Z	TACT SWITCH		
	S 942	QSW0674-001Z	TACT SWITCH		
	S 943	QSW0674-001Z	TACT SWITCH		
	S 948	QSW0674-001Z	TACT SWITCH		
	S 949	QSW0674-001Z	TACT SWITCH		
	S 950	QSW0674-001Z	TACT SWITCH		
	S 951	QSW0674-001Z	TACT SWITCH		
	S 952	QSW0674-001Z	TACT SWITCH		
	S 963	QSW0674-001Z	TACT SWITCH		
	S 964	QSW0674-001Z	TACT SWITCH		
	S 995	QSW0674-001Z	TACT SWITCH		
	S 996	QSW0674-001Z	TACT SWITCH		
	S 997	QSW0674-001Z	TACT SWITCH		
	S 998	QSW0674-001Z	TACT SWITCH		
	S 999	QSW0674-001Z	TACT SWITCH		
	SP801	VYH7653-001	IC HOLDER		
	X 801	QAX0283-001Z	RESONATOR		

■ **Electrical parts list (Tuner board)** **Block No. 04**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 1	NCB21HK-223X	C CAPACITOR		
	C 2	NCB21HK-103X	C CAPACITOR		
	C 3	EETC1CM-106ZJC	E.CAPACITOR		
	C 4	NCB21HK-103X	C CAPACITOR		
	C 6	NCB21HK-102X	C CAPACITOR		
	C 7	NCB21HK-102X	C CAPACITOR		
	C 8	NCB21HK-102X	C CAPACITOR		
	C 10	NRSA02J-0R0X	MG RESISTOR		
	C 11	NCB21HK-104X	C CAPACITOR		
	C 12	NCB21HK-473X	C CAPACITOR		
	C 13	NCS21HJ-120X	C CAPACITOR		
	C 14	EEKC1AM-107ZJC	E CAPACITOR		
	C 15	NCS21HJ-120X	C CAPACITOR		
	C 16	NCS21HJ-120X	C CAPACITOR		
	C 17	NCB21HK-392X	C CAPACITOR		
	C 18	QENC1HM-474Z	NP E.CAPACITOR	.47MF 20% 50V	
	C 19	NCB21HK-473X	C CAPACITOR		
	C 20	NCB21HK-102X	C CAPACITOR		
	C 21	NCB21HK-223X	C CAPACITOR		
	C 22	NCS21HJ-151X	C CAPACITOR		
	C 23	NCS21HJ-151X	C CAPACITOR		
	C 24	NCS21HJ-151X	C CAPACITOR		
	C 25	EEKC1AM-107ZJC	E CAPACITOR		
	C 26	NCB21HK-102X	C CAPACITOR		
	C 27	NCB21HK-102X	C CAPACITOR		
	C 30	EEKC1CM-107ZJC	E CAPACITOR		
	C 31	EEKC1CM-226ZJC	E CAPACITOR		
	C 32	NCB21HK-473X	C CAPACITOR		
	C 33	NCB21HK-473X	C CAPACITOR		
	C 34	NCB21HK-223X	C CAPACITOR		
	C 35	NCB21HK-473X	C CAPACITOR		
	C 36	EEKC1HM-105ZJC	E CAPACITOR		
	C 37	EEKC1HM-105ZJC	E CAPACITOR		
	C 38	EETC1HM-224ZJC	E CAPACITOR		
	C 39	EETC1HM-105ZJC	E CAPACITOR		
	C 40	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 41	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 42	NCB21HK-222X	C CAPACITOR		
	C 43	NCB21HK-222X	C CAPACITOR		
	C 44	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 45	QETN1CM-106Z	E CAPACITOR	10MF 20% 16V	
	C 46	NCB21HK-273X	C CAPACITOR		
	C 47	EETC1HM-105ZJC	E CAPACITOR		
	C 48	NCB21HK-222X	C CAPACITOR		
	C 49	NCS21HJ-471X	C CAPACITOR		
	C 50	EEKC1CM-226ZJC	E CAPACITOR		
	C 51	EEKC1HM-105ZJC	E CAPACITOR		
	C 52	QFVJ1HJ-274Z	MF CAPACITOR	.27MF 5% 50V	
	C 53	EETC1CM-226ZJC	E CAPACITOR		
	C 54	NCB21HK-473X	C CAPACITOR		
	C 57	NCB21HK-102X	C CAPACITOR		
	C 58	NCB21HK-473X	C CAPACITOR		
	C 59	NCB21HK-102X	C CAPACITOR		
	CF 1	VCF2L3B-105Z	CERAMIC FILTER		
	CF 2	VCF2L3B-105Z	CERAMIC FILTER		
	CF 3	QAX0610-001Z	C DISCRIMINATOR		
	CN 1	QGF1205F1-09	CONNECTOR		
	D 1	1SS133-T2	SI DIODE		
	D 2	1SS133-T2	SI DIODE		
	D 3	1SS133-T2	SI DIODE		
	D 4	1SS133-T2	SI DIODE		
	D 11	1SS133-T2	SI DIODE		
	IC 1	LA1838	IC		

⚠	Item	Parts number	Parts name	Remarks	Area
	IC 2	LC72136N	IC		
	J 1	QNB0014-001	ANT TERMINAL		
	L 1	QQR0796-002	COIL BLOCK		
	Q 1	2SC2814/4-5/-X	TRANSISTOR		
	Q 5	DTA114YKA-X	TRANSISTOR		
	R 1	QRE141J-560Y	C RESISTOR	56 5% 1/4W	
	R 2	NRSA02J-331X	MG RESISTOR		
	R 3	NRSA02J-224X	MG RESISTOR		
	R 4	NRSA02J-331X	MG RESISTOR		
	R 5	NRSA02J-560X	MG RESISTOR		
	R 6	NRSA02J-240X	MG RESISTOR		
	R 10	NRSA02J-222X	MG RESISTOR		
	R 13	NRSA02J-103X	MG RESISTOR		
	R 14	NRSA02J-104X	MG RESISTOR		
	R 15	NRSA02J-332X	MG RESISTOR		
	R 16	NRSA02J-472X	MG RESISTOR		
⚠	R 17	QRZ9005-680X	F RESISTOR	68 1/0W	
	R 18	NRSA02J-102X	MG RESISTOR		
	R 19	NRSA02J-102X	MG RESISTOR		
	R 20	NRSA02J-102X	MG RESISTOR		
	R 21	NRSA02J-562X	MG RESISTOR		
	R 22	NRSA02J-472X	MG RESISTOR		
	R 23	NRSA02J-182X	MG RESISTOR		
	R 24	NRSA02J-103X	MG RESISTOR		
	R 25	NRSA02J-331X	MG RESISTOR		
	R 26	NRSA02J-222X	MG RESISTOR		
	R 27	NRSA02J-103X	MG RESISTOR		
	R 28	NRSA02J-103X	MG RESISTOR		
	R 29	NRSA02J-103X	MG RESISTOR		
	R 30	NRSA02J-122X	MG RESISTOR		
	R 31	NRSA02J-102X	MG RESISTOR		
	R 32	NRSA02J-102X	MG RESISTOR		
	R 33	NRSA02J-331X	MG RESISTOR		
	R 34	NRSA02J-470X	MG RESISTOR		
	R 35	NRSA02J-562X	MG RESISTOR		
	R 36	NRSA02J-332X	MG RESISTOR		
	R 37	NRSA02J-103X	MG RESISTOR		
	R 38	NRSA02J-563X	MG RESISTOR		
	R 39	NRSA02J-563X	MG RESISTOR		
	R 40	NRSA02J-243X	MG RESISTOR		
	R 41	NRSA02J-332X	MG RESISTOR		
	R 60	NRSA02J-0R0X	MG RESISTOR		
	T 1	QQR0793-001	IFT		
	TU 1	QAU0161-001	FRONT END		
	X 1	QAX0402-001	CRYSTAL		

■ **Electrical parts list (CD servo control board)** **Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area
	C 251	NCS21HJ-100X	C CAPACITOR		
	C 252	NCS21HJ-100X	C CAPACITOR		
	C 253	NCB21EK-104X	C CAPACITOR		
	C 254	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 291	QERF1AM-476Z	E CAPACITOR	47MF 20% 10V	
	C 601	NCB21HK-102X	C CAPACITOR		
	C 602	NCB21HK-102X	C CAPACITOR		
	C 603	NCB21HK-223X	C CAPACITOR		
	C 604	NCB21HK-223X	C CAPACITOR		
	C 605	NCS21HJ-151X	C CAPACITOR		
	C 606	NCS31HJ-560X	C CAPACITOR		
	C 608	NCS21HJ-821X	C CAPACITOR		
	C 610	NCB21EK-273X	C CAPACITOR		
	C 612	QER41HM-105	E CAPACITOR	1.0MF 20% 50V	
	C 613	NCB21EK-104X	C CAPACITOR		
	C 614	NCB21HK-273X	C CAPACITOR		
	C 615	NCB21HK-472X	C CAPACITOR		
	C 616	NCB21HK-103X	C CAPACITOR		
	C 617	NCS21HJ-331X	C CAPACITOR		
	C 620	NCS21HJ-470X	C CAPACITOR		
	C 621	NCB21CK-105X	C CAPACITOR		
	C 622	NCB21EK-473X	C CAPACITOR		
	C 623	NCF21CZ-105X	C CAPACITOR		
	C 624	QERF0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 631	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 632	NCF21CZ-105X	C CAPACITOR		
	C 633	NCB21HK-223X	C CAPACITOR		
	C 641	NCB21HK-223X	C CAPACITOR		
	C 642	NCB21HK-222X	C CAPACITOR		
	C 651	NCS21HJ-120X	C CAPACITOR		
	C 652	NCS21HJ-120X	C CAPACITOR		
	C 653	NCB21EK-104X	C CAPACITOR		
	C 655	NCB21EK-104X	C CAPACITOR		
	C 656	NCB21EK-104X	C CAPACITOR		
	C 657	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 658	NCB21EK-104X	C CAPACITOR		
	C 661	NCS21HJ-471X	C CAPACITOR		
	C 663	NCB21HK-223X	C CAPACITOR		
	C 664	NCB21HK-223X	C CAPACITOR		
	C 665	NCB21CK-154X	C CAPACITOR		
	C 667	NCB21CK-105X	C CAPACITOR		
	C 668	NCB21EK-473X	C CAPACITOR		
	C 669	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 672	NCB21CK-334X	C CAPACITOR		
	C 673	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 676	NCB21EK-104X	C CAPACITOR		
	C 677	NCB21EK-104X	C CAPACITOR		
	C 679	QERF0JM-107Z	E CAPACITOR	100MF 20% 6.3V	
	C 680	NCB21EK-104X	C CAPACITOR		
	C 691	NCS21HJ-391X	C CAPACITOR		
	C 692	NCS21HJ-391X	C CAPACITOR		
	C 693	NCB21HK-682X	C CAPACITOR		
	C 694	NCB21HK-682X	C CAPACITOR		
	C 695	NCB21HK-473X	C CAPACITOR		
	C 696	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 699	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 801	NCB21HK-682X	C CAPACITOR		
	C 802	NCB21HK-123X	C CAPACITOR		
	C 811	NCS21HJ-391X	C CAPACITOR		
	C 812	NCS21HJ-391X	C CAPACITOR		
	C 813	NCS21HJ-391X	C CAPACITOR		
	C 814	NCS21HJ-391X	C CAPACITOR		
	C 815	QEQF1HM-225Z	E CAPACITOR	2.2MF 20% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	C 821	NCF21CZ-105X	C CAPACITOR		
	C 822	QER41AM-227	E CAPACITOR	220MF 20% 10V	
	C 852	QER41CM-106	E CAPACITOR	10MF 20% 16V	
	C 853	NCB21HK-103X	C CAPACITOR		
	C 854	NCB21HK-103X	C CAPACITOR		
	C 855	NCB21EK-104X	C CAPACITOR		
	C 859	NCF21CZ-105X	C CAPACITOR		
	C 860	NCF21CZ-105X	C CAPACITOR		
	CN601	QGF1016F3-15	15FFC CONNECTOR		
	CN651	QGF1016F3-19	CONNECTOR		
	CN801	QGA2001C1-06	6P PLUG ASSY		
	CN854	QGB2016K1-07	CONNECTOR		
	CN855	QGB2012K2-10	CONNECTOR		
	D 851	MTZJ5.6B-T2	ZENER DIODE		
	IC251	UPD780024AGKB25	IC		
	IC601	AN22000A	IC		
	IC651	MN662748RPM	IC		
	IC652	BA15218F-XE	IC		
	IC801	LA6541-X	IC		
	IC851	LB1641	IC		
	IC852	LB1641	IC		
	L 851	QQL01BK-100Z	INDUCTOR		
	L 853	QQL01BK-100Z	INDUCTOR		
	L 854	QQL01BK-100Z	INDUCTOR		
	Q 291	2SB1357/EF/-T	TRANSISTOR		
	Q 631	2SA1037AK/RS/-X	TRANSISTOR		
	R 253	NRSA02J-102X	MG RESISTOR		
	R 254	NRSA02J-102X	MG RESISTOR		
	R 255	NRSA02J-102X	MG RESISTOR		
	R 256	NRSA02J-102X	MG RESISTOR		
	R 257	NRSA02J-102X	MG RESISTOR		
	R 258	NRSA02J-102X	MG RESISTOR		
	R 260	NRSA02J-222X	MG RESISTOR		
	R 261	NRSA02J-223X	MG RESISTOR		
	R 262	NRSA02J-223X	MG RESISTOR		
	R 263	NRSA02J-223X	MG RESISTOR		
	R 264	NRSA02J-223X	MG RESISTOR		
	R 265	NRSA02J-223X	MG RESISTOR		
	R 274	NRSA02J-102X	MG RESISTOR		
	R 275	NRSA02J-102X	MG RESISTOR		
	R 276	NRSA02J-102X	MG RESISTOR		
	R 277	NRSA02J-102X	MG RESISTOR		
	R 280	NRSA02J-102X	MG RESISTOR		
	R 281	NRSA02J-102X	MG RESISTOR		
	R 284	NRSA02J-102X	MG RESISTOR		
	R 288	NRSA02J-102X	MG RESISTOR		
	R 289	NRSA02J-102X	MG RESISTOR		
	R 290	NRSA02J-102X	MG RESISTOR		
	R 291	NRSA02J-122X	MG RESISTOR		
	R 292	NRSA02J-103X	MG RESISTOR		
	R 294	NRSA02J-102X	MG RESISTOR		
	R 601	NRSA02J-224X	MG RESISTOR		
	R 602	NRSA02J-274X	MG RESISTOR		
	R 603	NRSA02J-124X	MG RESISTOR		
	R 604	NRSA02J-274X	MG RESISTOR		
	R 606	NRSA02J-623X	MG RESISTOR		
	R 607	NRSA02J-0R0X	MG RESISTOR		
	R 608	NRSA02J-0R0X	MG RESISTOR		
	R 609	NRSA02J-332X	MG RESISTOR		
	R 611	NRSA02J-223X	MG RESISTOR		
	R 613	NRSA02J-222X	MG RESISTOR		
	R 614	NRSA02J-223X	MG RESISTOR		
	R 618	NRSA02J-153X	MG RESISTOR		

■ **Electrical parts list (CD servo control board)** **Block No. 05**

⚠	Item	Parts number	Parts name	Remarks	Area
	R 619	NRSA02J-153X	MG RESISTOR		
	R 620	NRSA02J-564X	MG RESISTOR		
	R 621	NRSA02J-564X	MG RESISTOR		
	R 622	NRSA02J-822X	MG RESISTOR		
	R 623	NRSA02J-822X	MG RESISTOR		
	R 624	NRSA02J-0R0X	MG RESISTOR		
	R 625	NRSA02J-0R0X	MG RESISTOR		
	R 631	NRSA02J-2R2X	MG RESISTOR		
	R 632	NRSA02J-100X	MG RESISTOR		
	R 634	NRSA02J-120X	MG RESISTOR		
	R 635	NRSA02J-121X	MG RESISTOR		
	R 636	NRSA02J-100X	MG RESISTOR		
	R 641	NRSA02J-154X	MG RESISTOR		
	R 642	NRSA02J-394X	MG RESISTOR		
	R 651	NRSA02J-102X	MG RESISTOR		
	R 652	NRSA02J-102X	MG RESISTOR		
	R 653	NRSA02J-102X	MG RESISTOR		
	R 654	NRSA02J-101X	MG RESISTOR		
	R 655	NRSA02J-102X	MG RESISTOR		
	R 656	NRSA02J-102X	MG RESISTOR		
	R 657	NRSA02J-102X	MG RESISTOR		
	R 658	NRSA02J-102X	MG RESISTOR		
	R 659	NRSA02J-102X	MG RESISTOR		
	R 661	NRSA02J-393X	MG RESISTOR		
	R 662	NRSA02J-683X	MG RESISTOR		
	R 663	NRSA02J-124X	MG RESISTOR		
	R 664	NRSA02J-331X	MG RESISTOR		
	R 665	NRSA02J-271X	MG RESISTOR		
	R 666	NRSA02J-221X	MG RESISTOR		
	R 667	NRSA02J-4R7X	MG RESISTOR		
	R 668	NRSA02J-155X	MG RESISTOR		
	R 669	NRSA02J-562X	MG RESISTOR		
	R 670	NRSA02J-101X	MG RESISTOR		
	R 672	NRSA02J-272X	MG RESISTOR		
	R 682	NRSA02J-102X	MG RESISTOR		
	R 683	NRSA02J-105X	MG RESISTOR		
	R 684	NRSA02J-564X	MG RESISTOR		
	R 685	NRSA02J-683X	MG RESISTOR		
	R 689	NRSA02J-103X	MG RESISTOR		
	R 690	NRSA02J-103X	MG RESISTOR		
	R 691	NRSA02J-103X	MG RESISTOR		
	R 692	NRSA02J-103X	MG RESISTOR		
	R 695	NRSA02J-243X	MG RESISTOR		
	R 696	NRSA02J-243X	MG RESISTOR		
	R 701	NRSA02J-821X	MG RESISTOR		
	R 702	NRSA02J-821X	MG RESISTOR		
	R 703	NRSA02J-103X	MG RESISTOR		
	R 704	NRSA02J-103X	MG RESISTOR		
	R 705	NRSA02J-562X	MG RESISTOR		
	R 706	NRSA02J-202X	MG RESISTOR		
	R 707	NRSA02J-682X	MG RESISTOR		
	R 708	NRSA02J-101X	MG RESISTOR		
	R 709	NRSA02J-101X	MG RESISTOR		
	R 710	NRSA02J-221X	MG RESISTOR		
	R 801	NRSA02J-272X	MG RESISTOR		
	R 802	NRSA02J-392X	MG RESISTOR		
	R 803	NRSA02J-222X	MG RESISTOR		
	R 804	NRSA02J-224X	MG RESISTOR		
	R 805	NRSA02J-133X	MG RESISTOR		
	R 806	NRSA02J-243X	MG RESISTOR		
	R 807	NRSA02J-122X	MG RESISTOR		
	R 808	NRSA02J-273X	MG RESISTOR		
	R 809	NRSA02J-122X	MG RESISTOR		
	R 811	NRSA02J-103X	MG RESISTOR		
	R 812	NRSA02J-152X	MG RESISTOR		
	R 831	NRSA02J-151X	MG RESISTOR		
	R 832	NRSA02J-103X	MG RESISTOR		
	R 842	NRSA02J-472X	MG RESISTOR		
	R 851	NRSA02J-102X	MG RESISTOR		
	R 852	NRSA02J-102X	MG RESISTOR		
	R 853	NRSA02J-102X	MG RESISTOR		
	R 854	NRSA02J-102X	MG RESISTOR		
	R 856	NRSA02J-0R0X	MG RESISTOR		
	R 861	NRSA02J-102X	MG RESISTOR		
	R 862	NRSA02J-102X	MG RESISTOR		
	R 863	NRSA02J-102X	MG RESISTOR		
	R 864	NRSA02J-102X	MG RESISTOR		
	R 865	NRSA02J-102X	MG RESISTOR		
	R 866	NRSA02J-102X	MG RESISTOR		
	R 871	NRSA02J-223X	MG RESISTOR		
	R 872	NRSA02J-223X	MG RESISTOR		
	R 873	NRSA02J-223X	MG RESISTOR		
	R 874	NRSA02J-223X	MG RESISTOR		
	R 875	NRSA02J-223X	MG RESISTOR		
	R 876	NRSA02J-223X	MG RESISTOR		
	R 880	NRSA02J-102X	MG RESISTOR		
	R 881	NRSA02J-102X	MG RESISTOR		
	R 882	NRSA02J-102X	MG RESISTOR		
	R 883	NRSA02J-102X	MG RESISTOR		
	R 884	NRSA02J-102X	MG RESISTOR		
	R 885	NRSA02J-102X	MG RESISTOR		
	R 886	NRSA02J-102X	MG RESISTOR		
	R 887	NRSA02J-102X	MG RESISTOR		
	R 888	NRSA02J-223X	MG RESISTOR		
	R 889	NRSA02J-223X	MG RESISTOR		
	R 890	NRSA02J-223X	MG RESISTOR		
	R 891	NRSA02J-223X	MG RESISTOR		
	R 892	NRSA02J-223X	MG RESISTOR		
	R 893	NRSA02J-223X	MG RESISTOR		
	R 894	NRSA02J-223X	MG RESISTOR		
	R 895	NRSA02J-223X	MG RESISTOR		
	X 251	QAX0360-001Z	CRYSTAL		
	X 651	QAX0413-001Z	CRYSTAL		

■ **Electrical parts list (CD select switch board)** **Block No. 06**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN804	QGB2016J1-07	CONNECTOR		
	CN805	QGB2012J1-10	CONNECTOR		
	SW 1	QSW0859-001	DETECT SWITCH		
	SW 2	QSW0859-001	DETECT SWITCH		
	SW 3	QSW0859-001	DETECT SWITCH		
	SW 4	QSW0859-001	DETECT SWITCH		
	SW 5	QSW0859-001	DETECT SWITCH		
	SW 6	QSW0859-001	DETECT SWITCH		

■ **Electrical parts list**

(Head amplifier & mecanism control board) **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area
	CN301	QGF1205F1-06	CONNECTOR	A HEAD	
	CN302	QGF1205F1-06	CONNECTOR	B HEAD	
	CN303	QGB2011M1-10	B TO B CONNECTO		
	CN305	QGF1205F1-10	CONNECTOR	OUTPUT	
	CN306	QGF1205F1-09	CONNECTOR	CONTROL	
	CN333	QGB2011L1-10	B TO B CONNECTO	FOR FMP-007-1	
	C3101	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C3102	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C3103	QDGB1HK-821Y	C CAPACITOR		
	C3104	QDGB1HK-102Y	C CAPACITOR		
	C3105	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3107	EEKJ1HM-105ZJC	AL E.CAPACITOR		
	C3111	EEKJ1HM-104ZJC	AL E.CAPACITOR		
	C3112	EEKJ1CM-106ZJC	AL E.CAPACITOR		
	C3113	QDXB1CM-332Y	C CAPACITOR		
	C3114	EEKJ1EM-475ZJC	AL E.CAPACITOR		
	C3115	QFLK1HJ-153Z	M CAPACITOR	.015MF 5% 50V	
	C3116	QDYB1CM-822Y	C CAPACITOR		
	C3119	QFLM1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C3120	QCS11HJ-330	C CAPACITOR	33PF 5% 50V	
	C3121	QDGB1HK-102Y	C CAPACITOR		
	C3201	QCS11HJ-100	C CAPACITOR	10PF 5% 50V	
	C3202	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C3203	QDGB1HK-821Y	C CAPACITOR		
	C3204	QDGB1HK-102Y	C CAPACITOR		
	C3205	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3206	QFLK1HJ-333Z	M CAPACITOR	.033MF 5% 50V	
	C3207	EEKJ1HM-105ZJC	AL E.CAPACITOR		
	C3211	EEKJ1HM-104ZJC	AL E.CAPACITOR		
	C3212	EEKJ1CM-106ZJC	AL E.CAPACITOR		
	C3213	QDXB1CM-332Y	C CAPACITOR		
	C3214	EEKJ1EM-475ZJC	AL E.CAPACITOR		
	C3215	QFLK1HJ-153Z	M CAPACITOR	.015MF 5% 50V	
	C3216	QDYB1CM-822Y	C CAPACITOR		
	C3219	QFLM1HJ-563Z	M CAPACITOR	.056MF 5% 50V	
	C3220	QCS11HJ-330	C CAPACITOR	33PF 5% 50V	
	C3221	QDGB1HK-102Y	C CAPACITOR		
	C3222	QFLK1HJ-333Z	M CAPACITOR	.033MF 5% 50V	
	C3301	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3302	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3303	EEKJ1CM-226ZJC	AL E.CAPACITOR		
	C3304	EEKJ1EM-475ZJC	AL E.CAPACITOR		
	C3305	QFLK1HJ-393Z	M CAPACITOR	.039MF 5% 50V	
	C3306	EEKJ0JM-227ZJC	AL E.CAPACITOR		
	C3308	QDXB1CM-152Y	C CAPACITOR		
	C3313	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3314	QCZ0205-155Z	ML C CAPACITOR	1.5MF	
	C3315	QCBB1HK-223Y	C CAPACITOR	.022MF 10% 50V	
	C3316	QFG32AJ-103Z	PP CAPACITOR	.010MF 5% 100V	
	C3327	EEKJ1CM-476ZJC	AL E.CAPACITOR		
	C3335	QDYB1CM-103Y	C CAPACITOR		
	C3336	QDYB1CM-103Y	C CAPACITOR		
	C3339	EEKJ1CM-476ZJC	AL E.CAPACITOR		
	C3340	QDYB1CM-103Y	C CAPACITOR		
	C3341	EEKJ1AM-107ZJC	AL E.CAPACITOR		
	C3342	EEKJ1EM-475ZJC	AL E.CAPACITOR		
	C3345	QCBB1HK-331Y	C CAPACITOR	330PF 10% 50V	
	C3350	QDGB1HK-102Y	C CAPACITOR		
	C3501	QDGB1HK-821Y	C CAPACITOR		
	C3502	QCBB1HK-271Y	C CAPACITOR	270PF 10% 50V	
	C3555	QDGB1HK-102Y	C CAPACITOR		
	C3601	QDGB1HK-821Y	C CAPACITOR		
	C3602	QCBB1HK-271Y	C CAPACITOR	270PF 10% 50V	

⚠	Item	Parts number	Parts name	Remarks	Area
	D3302	1SR139-400-T2	SI DIODE		
	D3307	DZ5.1BSB-T2	Z DIODE	NEW SUPPLIER	
	D3308	DZ5.1BSB-T2	Z DIODE		
	D3309	DZ5.1BSB-T2	Z DIODE		
	D3331	1SR139-400-T2	SI DIODE		
	FW301	EWR34D-10CS	FLAT WIRE	TO MOTOR CONTRO	
	IC301	BA3126N	IC	HEAD SW	
	IC302	AN7345K	IC	PRE AMP	
	IC303	BU4094BC	IC		
	IC331	SG-105F3-BB,C	PHOTO SENSER		
	IC332	SG-105F3-BB,C	PHOTO SENSER		
	L3202	QQR0621-001Z	FERRITE BEADS		
	L3301	QQR1118-001	OSC COIL(BIAS)		
	L3303	QQL01BK-100Z	INDUCTOR		
	P3302	QNZ0104-001	POST PIN		
	P3331	QNZ0104-001	POST PIN		
	Q3105	2SC3576-JVC-T	TRANSISTOR		
	Q3205	2SC3576-JVC-T	TRANSISTOR		
	Q3302	2SC2001/K/-T	TRANSISTOR		
	Q3305	2SC2001/K/-T	TRANSISTOR		
	Q3312	2SB562/C/-T	TRANSISTOR		
	Q3313	KTC3199/GL/-T	TRANSISTOR		
	Q3314	2SB562/C/-T	TRANSISTOR		
	Q3315	KTC3199/GL/-T	TRANSISTOR		
	Q3316	KTA1267/YG/-T	TRANSISTOR		
	Q3317	KRC107M-T	D.TRANSISTOR		
	Q3323	KRC104M-T	D.TRANSISTOR		
	Q3324	KRA102M-T	D.TRANSISTOR		
	R3103	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R3105	QRE141J-220Y	C RESISTOR	22 5% 1/4W	
	R3106	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R3107	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3108	QRE141J-241Y	C RESISTOR	240 5% 1/4W	
	R3111	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R3112	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R3113	QRE141J-271Y	C RESISTOR	270 5% 1/4W	
	R3114	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R3117	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R3118	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R3119	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
	R3120	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R3121	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R3203	QRE141J-183Y	C RESISTOR	18K 5% 1/4W	
	R3205	QRE141J-220Y	C RESISTOR	22 5% 1/4W	
	R3206	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R3207	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3208	QRE141J-241Y	C RESISTOR	240 5% 1/4W	
	R3211	QRE141J-562Y	C RESISTOR	5.6K 5% 1/4W	
	R3212	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R3213	QRE141J-271Y	C RESISTOR	270 5% 1/4W	
	R3214	QRE141J-391Y	C RESISTOR	390 5% 1/4W	
	R3217	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R3218	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R3219	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
	R3220	QRE141J-102Y	C RESISTOR	1.0K 5% 1/4W	
	R3221	QRE141J-122Y	C RESISTOR	1.2K 5% 1/4W	
	R3301	QRE141J-221Y	C RESISTOR	220 5% 1/4W	
	R3302	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R3304	QRE141J-393Y	C RESISTOR	39K 5% 1/4W	
	R3309	QRE141J-152Y	C RESISTOR	1.5K 5% 1/4W	
	R3311	QRJ146J-4R7X	UNF C.RESISTOR	4.7 5% 1/4W	
	R3314	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R3315	QRE141J-153Y	C RESISTOR	15K 5% 1/4W	

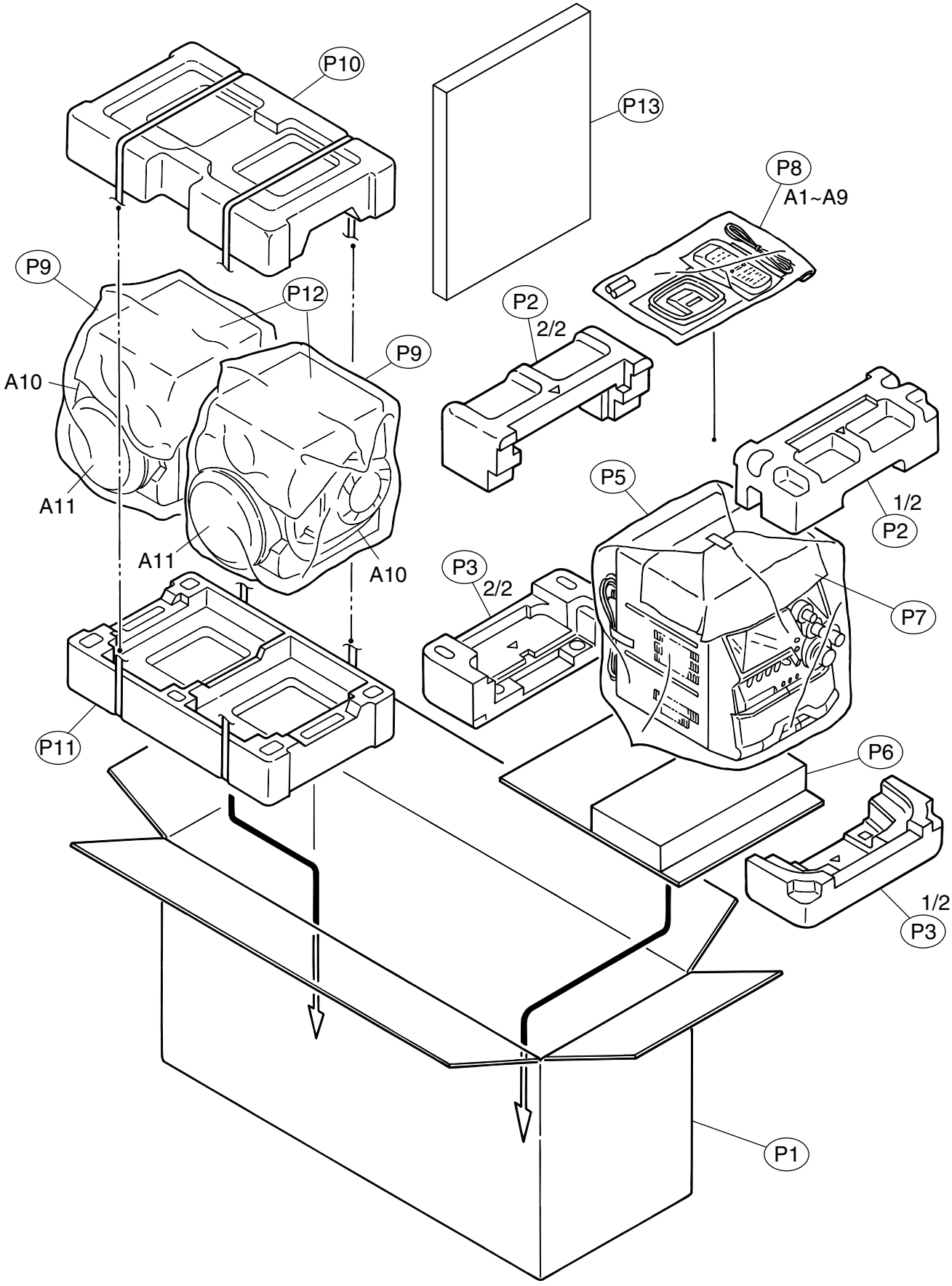
■ **Electrical parts list**
(Head amplifier & mecanism control board) **Block No. 07**

⚠	Item	Parts number	Parts name	Remarks	Area
	R3327	QRE141J-474Y	C RESISTOR	470K 5% 1/4W	
	R3330	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3331	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3335	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3336	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R3344	QRE141J-224Y	C RESISTOR	220K 5% 1/4W	
	R3345	QRE141J-473Y	C RESISTOR	47K 5% 1/4W	
	R3347	QRE141J-392Y	C RESISTOR	3.9K 5% 1/4W	
	R3348	QRE141J-222Y	C RESISTOR	2.2K 5% 1/4W	
	R3350	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R3351	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R3353	QRE141J-472Y	C RESISTOR	4.7K 5% 1/4W	
	R3354	QRE141J-151Y	C RESISTOR	150 5% 1/4W	
	R3355	QRE141J-332Y	C RESISTOR	3.3K 5% 1/4W	
	R3359	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3361	QRE141J-393Y	C RESISTOR	39K 5% 1/4W	
	R3362	QRE141J-243Y	C RESISTOR	24K 5% 1/4W	
	R3366	QRE141J-273Y	C RESISTOR	27K 5% 1/4W	
	R3367	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3368	QRE141J-223Y	C RESISTOR	22K 5% 1/4W	
	R3369	QRE141J-101Y	C RESISTOR	100 5% 1/4W	
	R3370	QRE141J-103Y	C RESISTOR	10K 5% 1/4W	
	R3374	QRE141J-2R2Y	C RESISTOR	2.2 5% 1/4W	
	R3376	QRZ9005-100X	F RESISTOR	10 1/0W	
	R3377	QRE141J-470Y	C RESISTOR	47 5% 1/4W	
	R3378	QRE141J-470Y	C RESISTOR	47 5% 1/4W	
	R3379	QRE141J-203Y	C RESISTOR	20K 5% 1/4W	
	R3380	QRE141J-470Y	C RESISTOR	47 5% 1/4W	
	R3381	QRE141J-470Y	C RESISTOR	47 5% 1/4W	
	R3383	QRE141J-471Y	C RESISTOR	470 5% 1/4W	
	SW302	QSW0832-001	LEAF SWITCH		
	SW303	QSW0832-001	LEAF SWITCH		
	SW304	QSW0832-001	LEAF SWITCH		
	SW305	QSW0832-001	LEAF SWITCH		
	SW306	QSW0859-001	DETECT SWITCH		
	SW316	QSW0859-001	DETECT SWITCH		
	VR101	QVP0008-503Z	SEMI.V.RESISTOR		
	VR201	QVP0008-503Z	SEMI.V.RESISTOR		
	VR301	QVP0008-103Z	SEMI.V.RESISTOR		

Packing materials and accessories parts list

Block No. M 5 M M

Block No. M 6 M M



■ Parts list (Packing)

Block No. M5MM

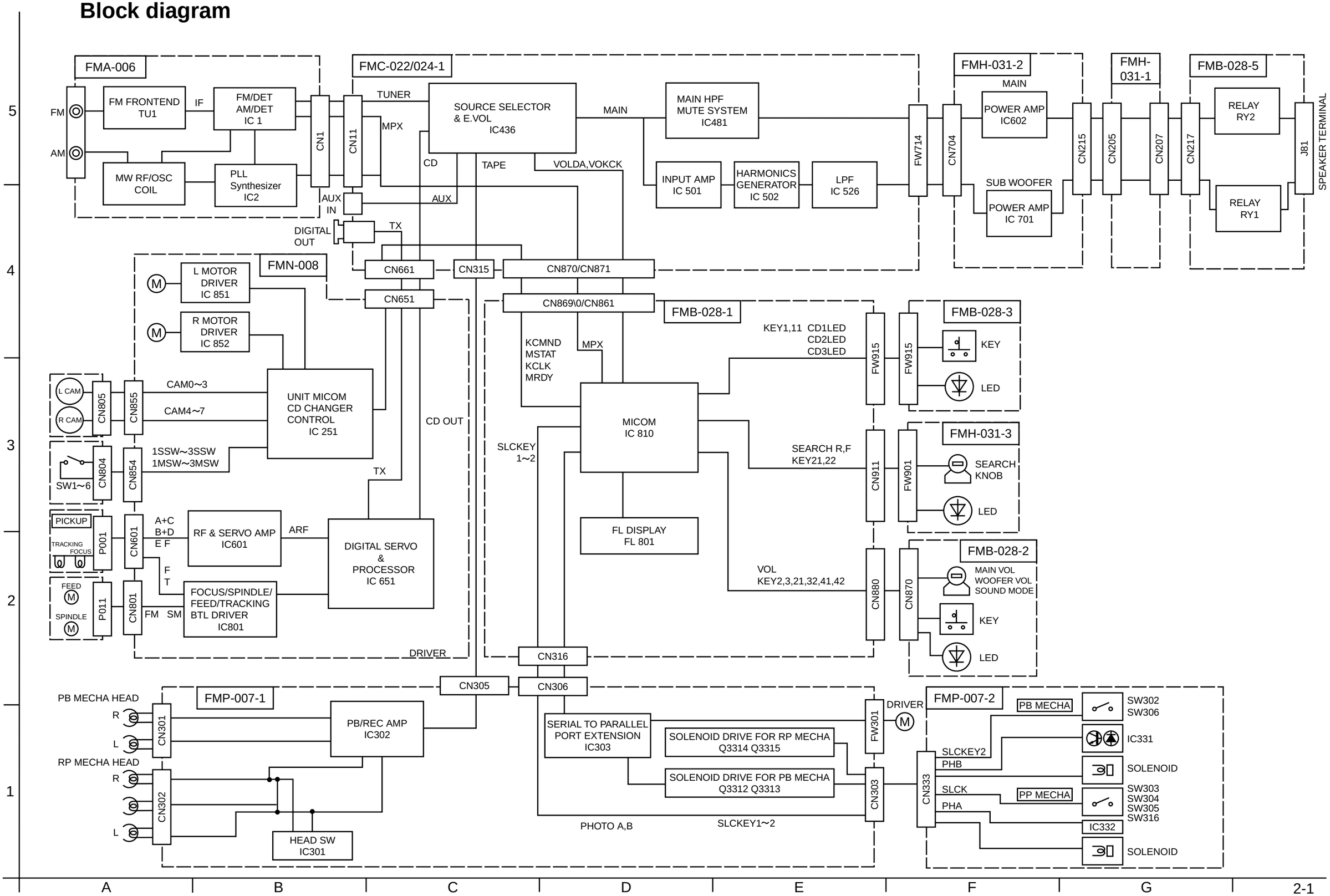
⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	P 1	GV20114-002A	PACKING CASE	1		C
		GV20114-001A	PACKING CASE	1		J
	P 2	GV10071-002A	CUSHION UPPER	1		
	P 3	GV10072-002A	CUSHION BOTTOM	1		
	P 5	QPC06507015P	POLY BAG	1		
	P 6	GV30214-001A	SPACER	1		
	P 7	GV40168-001A	SHEET	1	STICK AT FRONT	
	P 8	QPC02503515P	POLY BAG	1		
	P 9	138737001089	POLY BAG	2	FOR SPEAKER	
	P 10	139766061059	CUSHION UPPER	1	FOR SPEAKER	
	P 11	139766061060	CUSHION BOTTOM	1	FOR SPEAKER	
	P 12	138764501088	MIRROR MAT	2	FOR SPEAKER	
	P 13	GV40232-001A	PACKING SPACER	1		

■ Parts list (Accessories)

Block No. M6MM

⚠	Item	Parts number	Parts name	Q'ty	Description	Area
	A 1	GVT0052-002A	INST BOOK	1	ENG,FRE	C
		GVT0052-001A	INST BOOK	1	ENG	J
	A 2	GV40215-001B	NOTICE/AVIS	1	PUT OUTSIDE INS	
	A 3	BT-51020-2	J=REGIST CARD	1		J
	A 4	BT-52004-1	WARRANTY CARD	1		C
	A 5	BT-20071B	JVC CENTER LIST	1		C
	A 6	QAL0014-001	AM LOOP ANT	1		
	A 7	EWP503-001	ANT.WIRE	1		
	A 8	RM-SMXGT90A	REMOCON	1		
	A 9	----------	BATTERY	2		
	A 10	MXG70K-SPBOX-R	SP BOX ASS'Y(R)	1		
		MXG70K-SPBOX-L	SP BOX ASS'Y(L)	1		
	A 11	199732000127	GRILL FRAME ASSY	2		

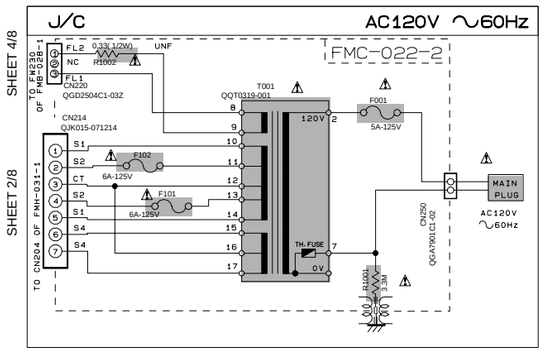
Block diagram



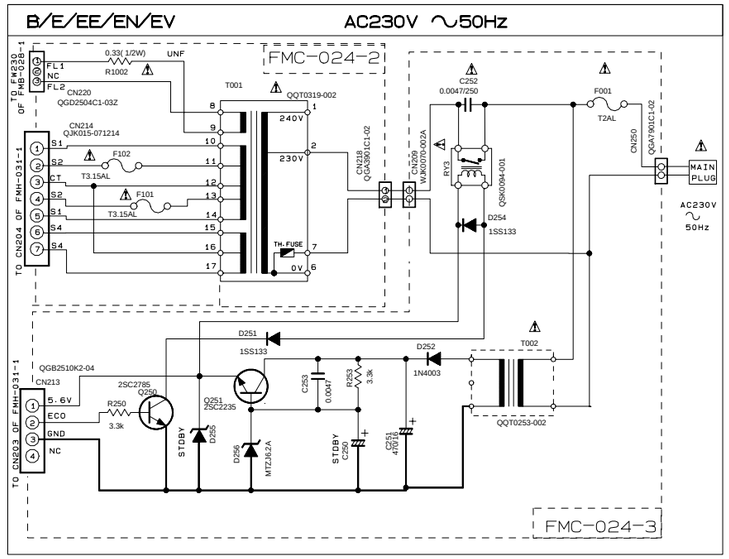
Standard schematic diagrams

■ Power supply section

POWER SUPPLY BLOCK



POWER SUPPLY BLOCK



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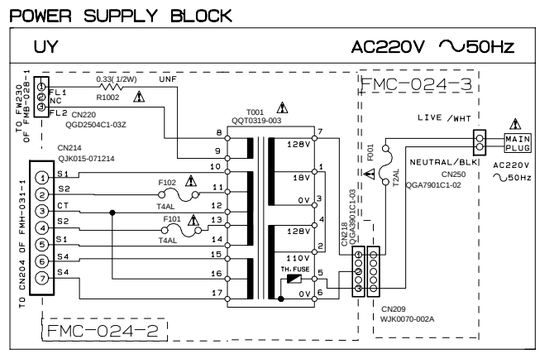

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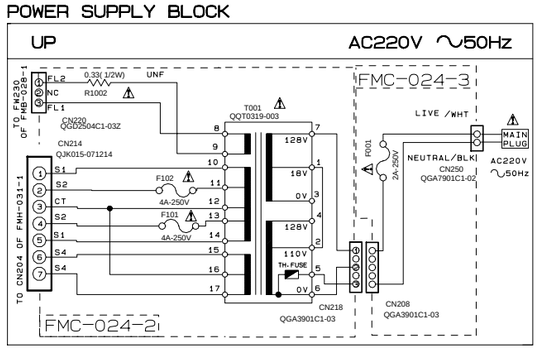

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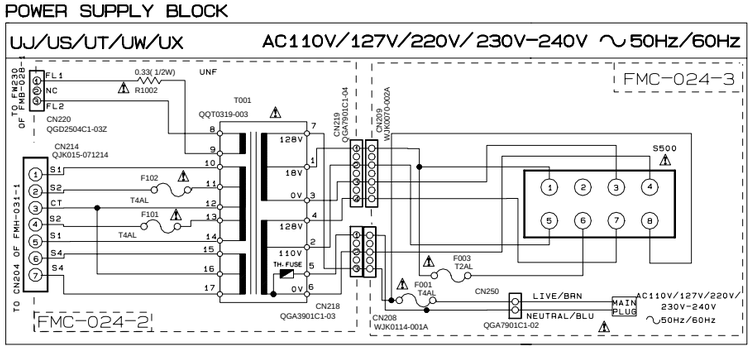
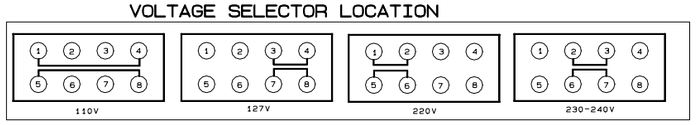
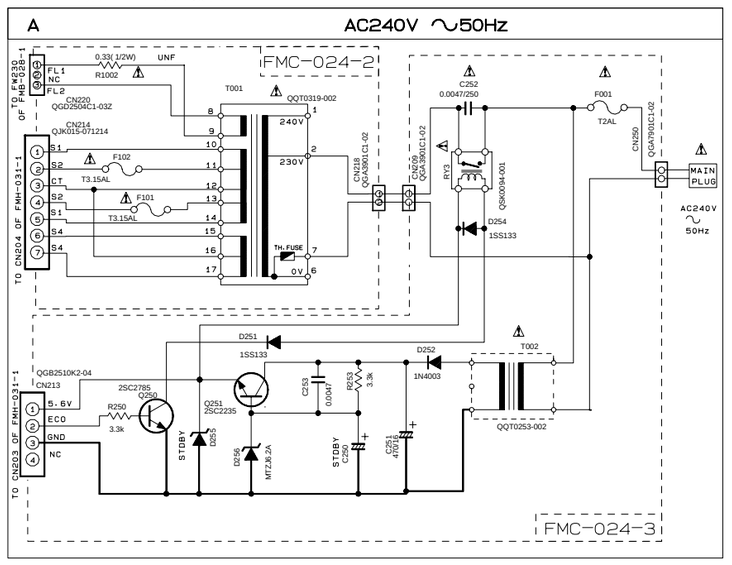


VOLTAGE SELECTOR LOCATION



POWER SUPPLY BLOCK



EXPLANATION OF OVERALL OF SCHEMA.	
MODEL	MX-G70 J/C

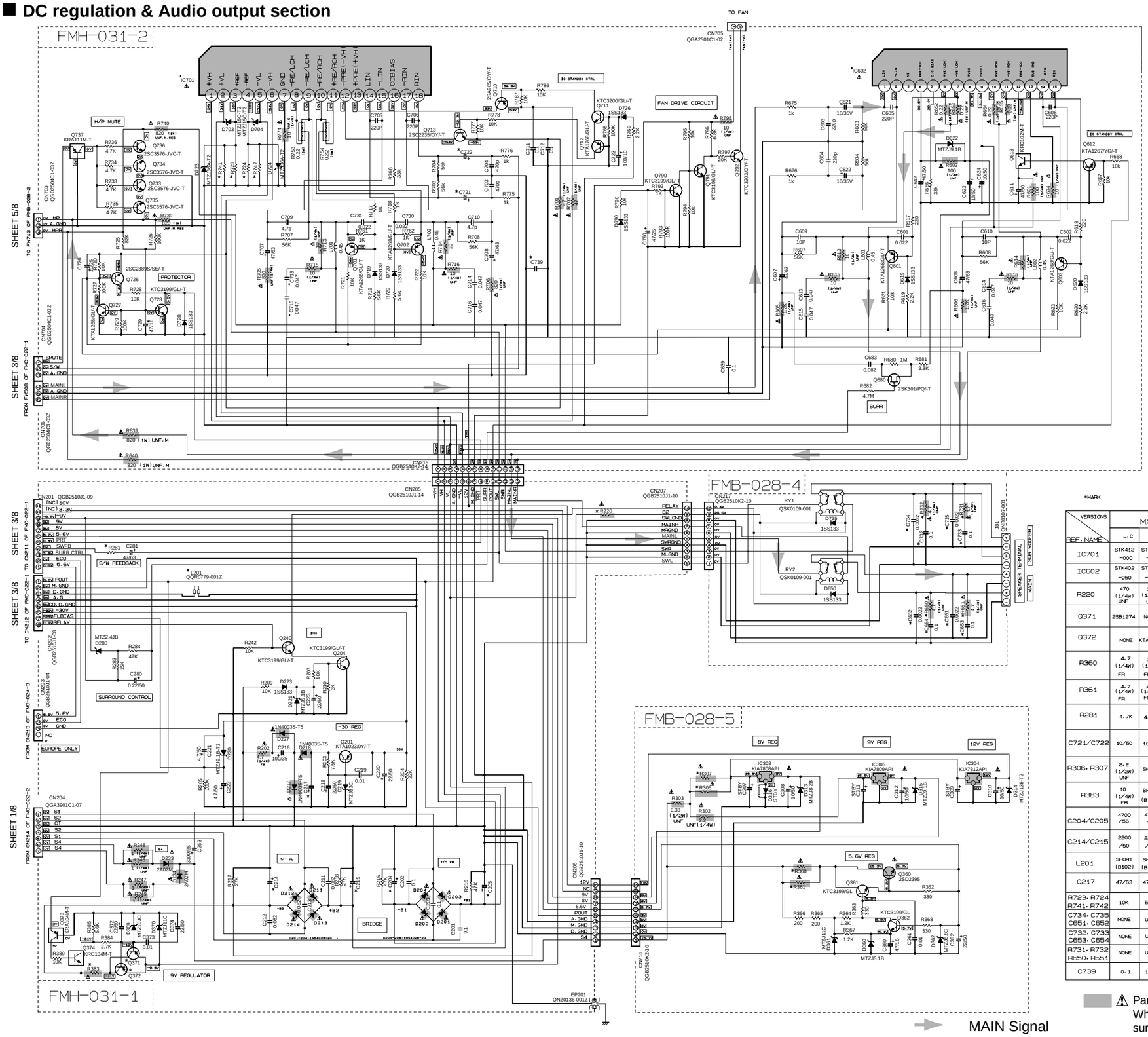
SHEET NUMBER	MODEL NUMBERS TO BE APPLIED	CIRCUITS DESCRIPTION
1/8	MX-G70	. PRIMARY WITH MAINS TRANSFORMER
2/8	MX-G70	. DC REGULATORS/AUDIO OUTPUT
3/8	MX-G70	. EXTERNAL INPUT, SOURCE SELECTOR SWITCH
4/8	MX-G70	. FL DISPLAYS, SYSTEM CONTROL LSI
5/8	MX-G70	. USER CONTROL KEYS, MIC AMP
6/8	MX-G70	. CD SERVO AND CD SYSTEM CONTROL . CD CHANGER MECHANISM CONTROL
7/8	MX-G70	. TAPE DECK MECHANISM CONTROL . TAPE CIRCUITS SUCH AS PRE-AMP AND BIAS
8/8	MX-G70	. TUNER RF/IF/FM MULTIPLEX

VERSION CODES

J	: U.S.A.
C	: CANADA
B	: U.K.
E	: CONTINENTAL EUROPE
EE	: RUSSIA
EN	: NORDIC COUNTRIES
EV	: EASTERN EUROPE
A	: AUSTRALIA
UJ	: MILITARY
UP	: KOREA
UT	: TAIWAN
UX	: SAUDI ARABIA
UY	: ARGENTINA
UW	: SOUTH AMERICA EXCEPT ARGENTINA
US	: SINGAPORE AND UNIVERSAL EXCEPT ALL OF ABOVES

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

■ DC regulation & Audio output section



NOTES

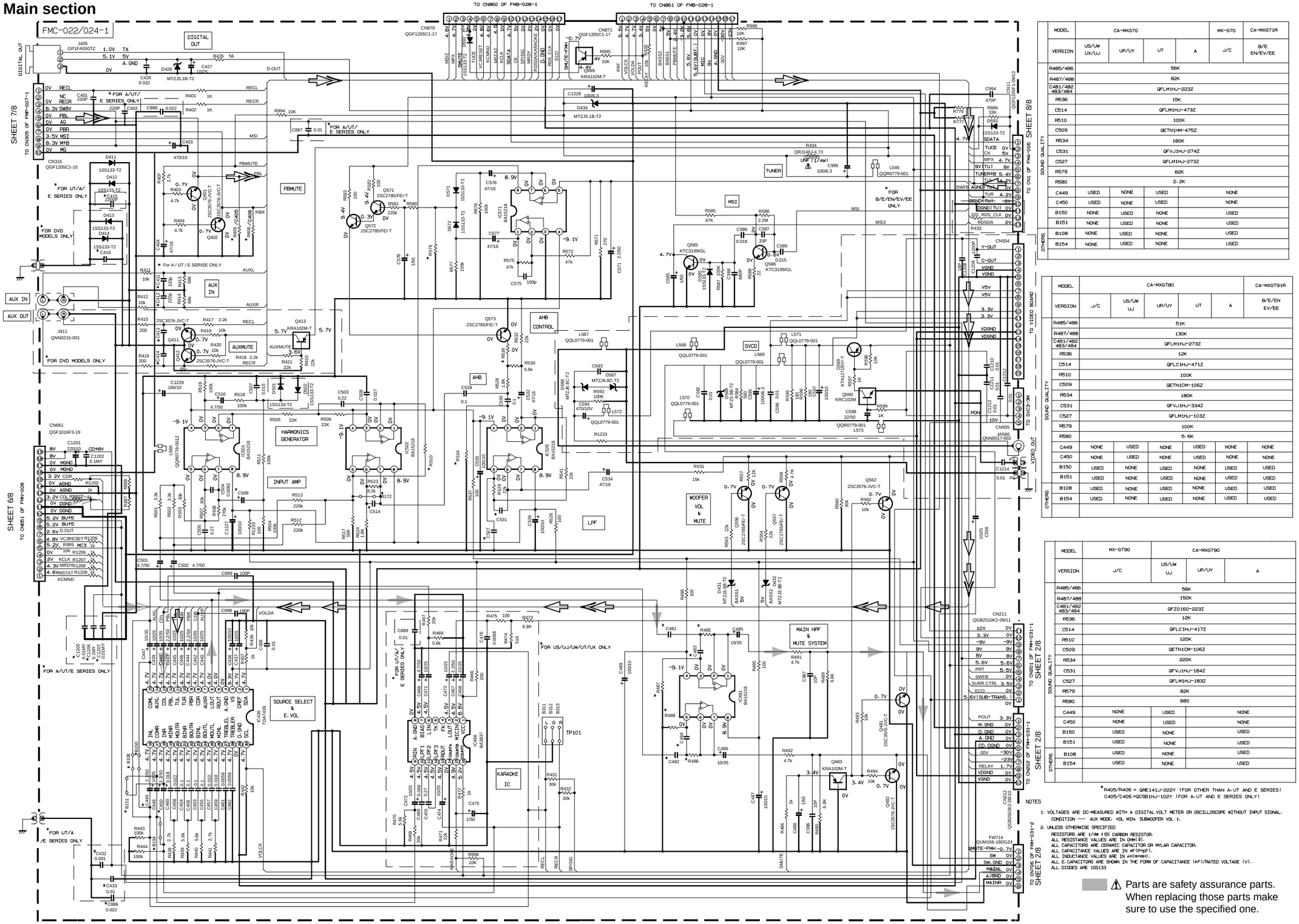
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION — AUX MODE- VOL MIN- BASS OFF
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/4W ± 5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHMS Ω.
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN ≠F(=μF).
   ALL INDUCTANCE VALUES ARE IN ≠H(=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (≠F)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133

*MARK

REF. NAME \ VERSIONS	MX-G70				MX-GT80				MX-GT90			
	J, C	A, E	U	UT	J, C	A, E	U	UT	J, C	A	U	UT
IC701	STK412 -000	STK412 -000	STK412 -090	STK412 -090	STK412 -010	STK412 -010	STK412 -000	STK412 -000	STK412 -020	STK412 -010	STK412 -010	STK412 -010
IC602	STK402 -050	STK402 -030	STK402 -030	STK402 -030	STK402 -050	STK402 -030	STK402 -030	STK402 -030	STK402 -070	STK402 -050	STK402 -050	STK402 -050
R220	470 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF	470 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF	470 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF	150 (1/4W) UNF
Q371	2SB1274	NONE	NONE	NONE	2SB1274	NONE	NONE	NONE	2SB1274	NONE	NONE	NONE
Q372	NONE	KTA1023	KTA1023	KTA1023	NONE	KTA1023	KTA1023	KTA1023	NONE	KTA1023	KTA1023 KTA1023	
R360	4.7 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR	4.7 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR	4.7 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR	2.2 (1/4W) FR
R361	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR	4.7 (1/4W) FR
R281	4.7K	4.7K	4.7K	4.7K	7.5K	5.6K	5.6K	5.6K	8.2K	5.6K	5.6K	5.6K
C721/C722	10/50	10/50	10/50	10/50	10/50	10/50	10/50	10/50	10/35	10/35	10/35	10/35
R306, R307	2.2 (1/2W) UNF	SHORT	SHORT	SHORT	2.2 (1/2W) UNF	SHORT	SHORT	SHORT	2.2 (1/2W) UNF	SHORT	SHORT	SHORT
R383	10 (1/4W) FR	SHORT (B123)	SHORT (B123)	SHORT (B123)	10 (1/4W) FR	SHORT (B123)	SHORT (B123)	SHORT (B123)	10 (1/4W) FR	SHORT (B123)	SHORT (B123)	SHORT (B123)
C204/C205	4700 /56	4700 /56	4700 /56	4700 /56	4700 /63	4700 /63	4700 /56	4700 /56	4700 /63	4700 /63	4700 /63	4700 /63
C214/C215	2200 /50	2200 /35	2200 /35	2200 /35	2200 /50	2200 /35	2200 /35	2200 /35	2200 /50	2200 /50	2200 /50	2200 /50
L201	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)	SHORT (B102)
C217	47/63	47/63	47/63	47/63	47/63	47/63	47/63	47/63	47/100	47/100	47/100	47/100
R723, R724 R741, R742	10K	6.8K	6.8K	6.8K	10K	6.8K	6.8K	6.8K	10K	6.8K	6.8K	6.8K
C734, C735 C651, C652	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE
C732, C733 C653, C654	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE
R731, R732 R650, R651	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE	NONE	USE	NONE	NONE
C739	0.1	1/50	1/50	1/50	0.1	1/50	1/50	1/50	0.1	1/50	1/50	1/50

⚠ Parts are safety assurance parts.
When replacing those parts make sure to use the specified one.

■ Main section



	MODEL	CA-MXG70				MX-G70	CA-MXG71R
	VERSION	US/UW UX/UJ	UP/UY	UT	A	J/C	B/E EN/EV/EE
SOUND QUALITY	R485/486	56K					
	R487/488	82K					
	C481/482 483/484	QFLM1HJ-223Z					
	R536	15K					
	C514	QFLM1HJ-473Z					
	R510	100K					
	C509	QETN1HM-475Z					
	R534	180K					
	C531	QFVJ1HJ-274Z					
	C527	QFLM1HJ-273Z					
	R579	82K					
	R580	2.2K					
	C449	USED	NONE	USED		NONE	
	C450	USED	NONE	USED		NONE	
	B150	NONE	USED	NONE		USED	
	B151	NONE	USED	NONE		USED	
OTHERS	B108	NONE	USED	NONE		USED	
	B154	NONE	USED	NONE		USED	

	MODEL	CA-MXGTB0					CA-MXGT91R
	VERSION	J/C	US/UW UJ	UP/UY	UT	A	B/E/EN EV/EE
SOUND QUALITY	R485/486	51K					
	R487/488	130K					
	C481/482 483/484	QFLM1HJ-273Z					
	R536	12K					
	C514	QFLC1HJ-471Z					
	R510	100K					
	C509	QETN1CM-106Z					
	R534	180K					
	C531	QFVJ1HJ-334Z					
	C527	QFLM1HJ-103Z					
	R579	100K					
	R580	5.6K					
	C449	NONE	USED	NONE	USED	NONE	NONE
	C450	NONE	USED	NONE	USED	NONE	NONE
	B150	USED	NONE	USED	NONE	USED	USED
	B151	USED	NONE	USED	NONE	USED	USED
OTHERS	B108	USED	NONE	USED	NONE	USED	USED
	B154	USED	NONE	USED	NONE	USED	USED

	MODEL	MX-GT90	CA-MXGT90		
	VERSION	J/C	US/UW UJ	UP/UY	A
SOUND QUALITY	R485/486	56K			
	R487/488	150K			
	C481/482 483/484	QFZ0160-223Z			
	R536	12K			
	C514	QFLC1HJ-417Z			
	R510	120K			
	C509	QETN1CM-106Z			
	R534	220K			
	C531	QFVJ1HJ-184Z			
	C527	QFLM1HJ-183Z			
	R579	82K			
	R580	680			
	C449	NONE	USED	NONE	
	C450	NONE	USED	NONE	
	B150	USED	NONE	USED	
	B151	USED	NONE	USED	
OTHERS	B108	USED	NONE	USED	
	B154	USED	NONE	USED	

*R405/R406 = QRE141J-222Y (FOR OTHER THAN A,UT AND E SERIES)
C405/C406 =QCSB1HJ-102Y (FOR A,UT AND E SERIES ONLY)

NOTES

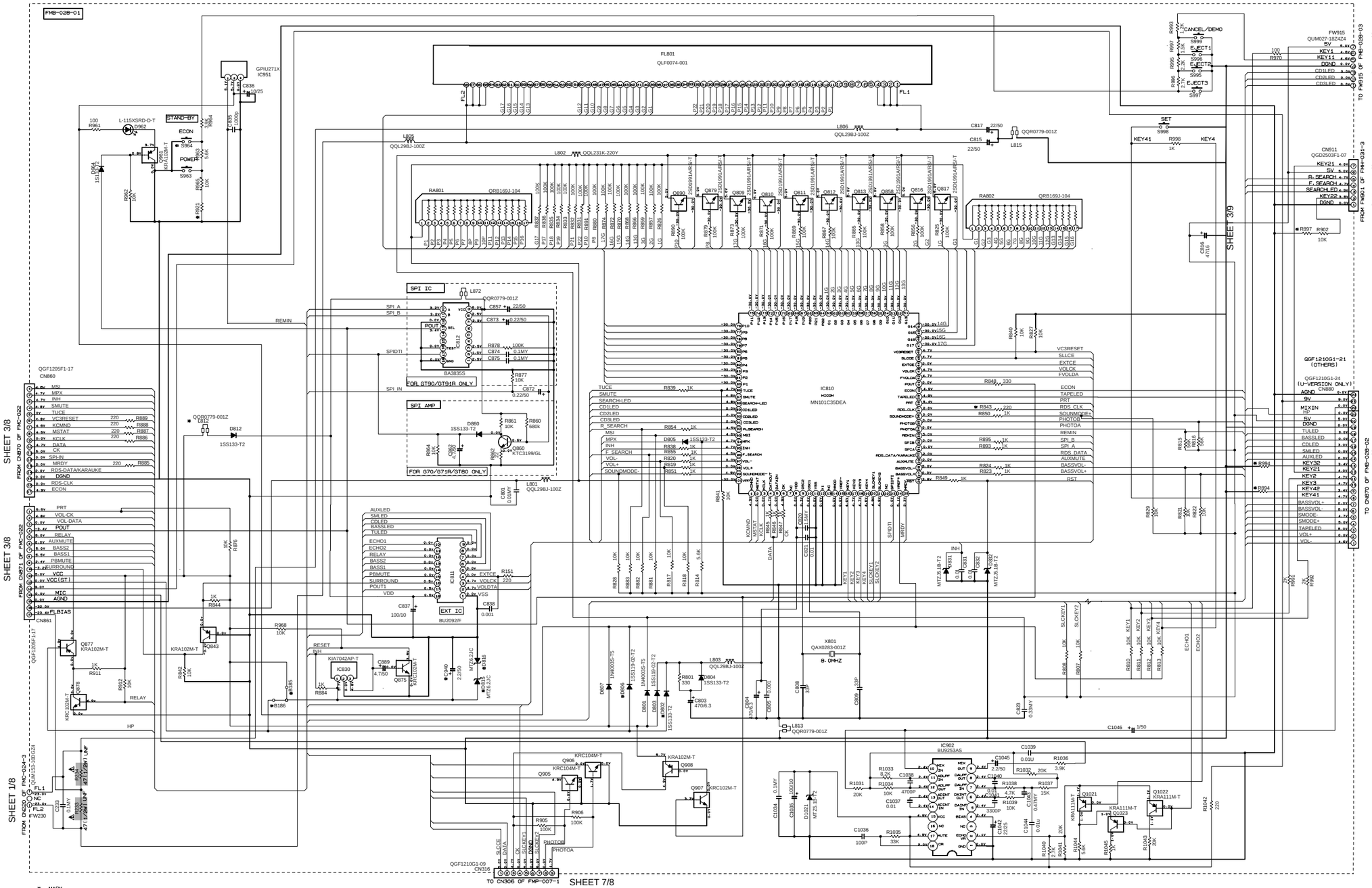
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION ---- AUX MODE, VOL MIN. SUBWOOFER VOL 1.
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/4W ±5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN Ω(W)(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

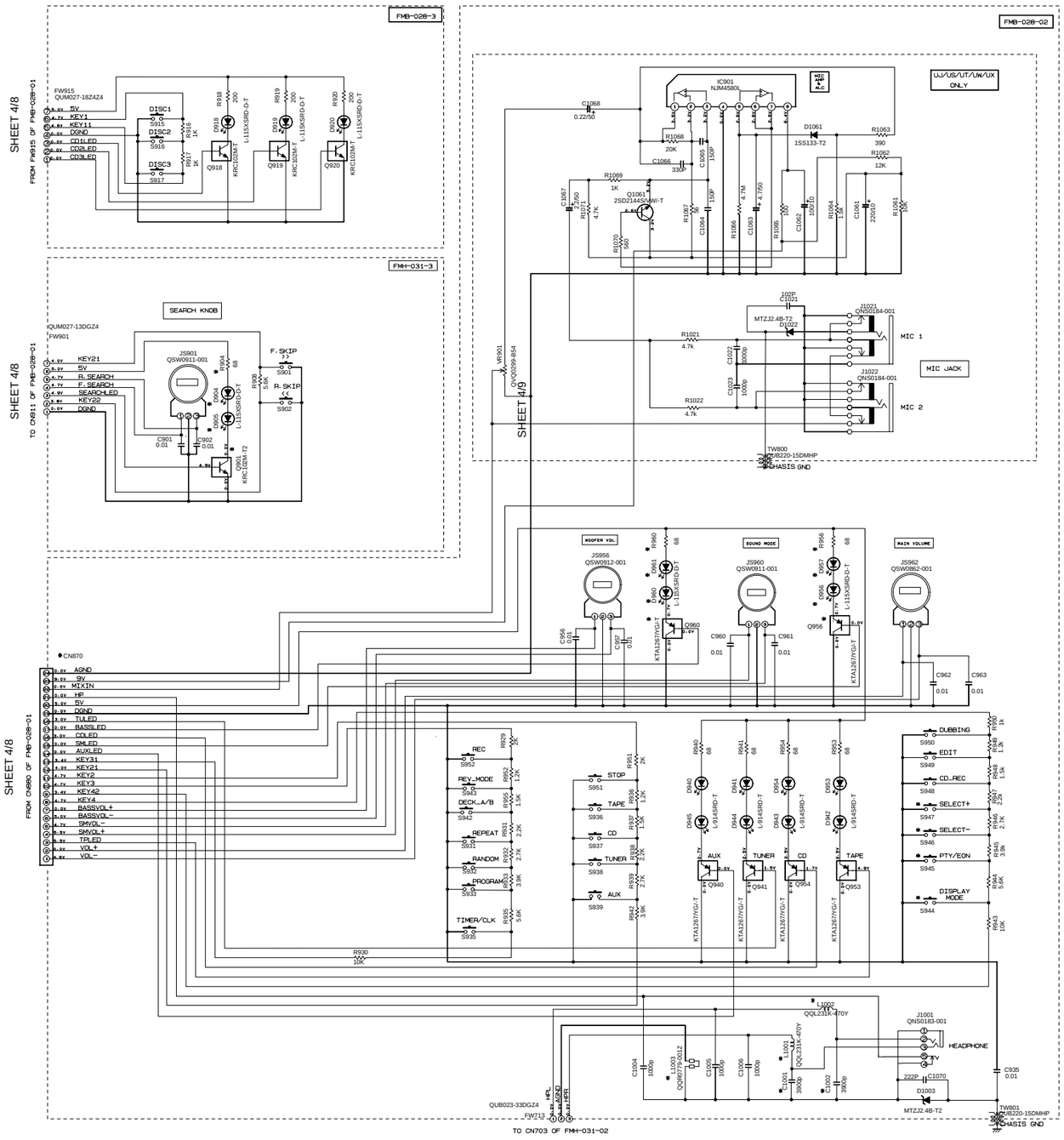
MAIN signal TAPE P.B. signal CD signal TUNER signal

SHEET 3/8

■ FL & System control section


FMB-028-01
FL801
QLF0074-001
IC810
MICOM
MN101C35DEA
SPI IC
SPI AMP
FOR GT90/GT91R ONLY
FOR G70/G71R/GT80 ONLY
EXT IC
BU2092/F
IC902
BU9253AS
IC830
KIA7042AP-T
IC811
BA3835S
X801
8. 0MHZ
CANCEL/DEMO
EJECT1
EJECT2
EJECT3
SET
KEY41
KEY4
SHEET 3/9
SHEET 5/8
SHEET 3/8
SHEET 1/8
TO CN870 OF FMC-022
FROM CN871 OF FMC-022
FROM CN860 OF FMC-024-3
FROM FW915 OF FMB-028-03
TO CN870 OF FMB-028-02
TO CN306 OF FMP-007-1
SHEET 7/8
QGF1205F1-17
QGF1205F1-11
QGF1210G1-24
(U-VERSION ONLY)
QGF1210G1-21
(OTHERS)
QGF1210G1-09
CN316
CN860
CN861
CN880
CN911
FW915
QUM027-18Z4Z4
QQR0779-001Z
QQL29BJ-100Z
QQL231K-220Y
QRB169J-104
QQL2983-100Z
QAX0283-001Z
QQR0779-001Z
QQR0779-001Z
QQR0779

■ Front key section



SHEET 2/8

* MARK

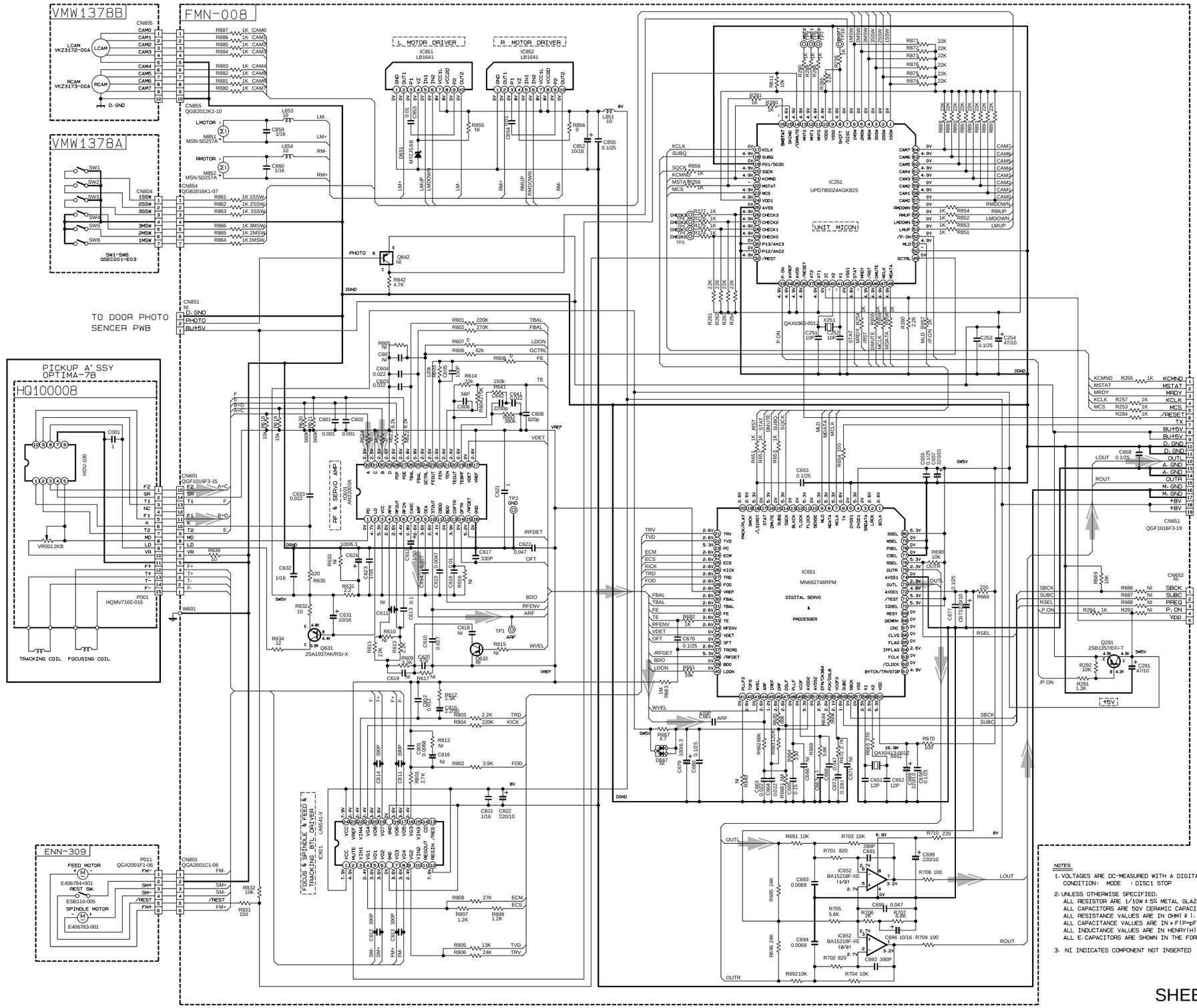
	CA-MXG71R B. E. EN. EV	CA-MXG70 A	MX-G70 J. C	CA-MXG70 UX	CA-MXG70 UJ. UP. US. UT. UW	CA-MXG70 UY	MX-G71R EE	CA-MXGT80 UJ. UP. US UT. UW	MX-GT80 C. J	CA-MXGT91R B. E. EN. EV	MX-GT91R EE	CA-MXGT80 A	CA-MXGT80 UY	CA-MXGT90 UJ. UP. US. UW	MX-GT90 C. J	MX-GT90 A	MX-GT90 UY
D904. D905. D956. D957 D960. D961	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	L-115XSRD-D-T	L-115XSRD-D-T	L-115XSRD-D-T	NONE	NONE	L-115XSRD-D-T	L-115XSRD-D-T	L-115XSRD-D-T	L-115XSRD-D-T
S944. S945. S946. S947	QSW0825-001Z	NONE	NONE	NONE	NONE	NONE	QSW0825-001Z	NONE	NONE	QSW0825-001Z	QSW0825-001Z	NONE	NONE	NONE	NONE	NONE	NONE
L1001. L1002	QQL231K-470Y	QQL231K-470Y	SHORT	SHORT	SHORT	SHORT	QQL231K-470Y	SHORT	SHORT	QQL231K-470Y	QQL231K-470Y	SHORT	SHORT	SHORT	SHORT	QQL231K-470Y	SHORT
C1001. C1002	3900P	3900P	NONE	NONE	NONE	NONE	3900P	NONE	NONE	3900P	3900P	3900P	NONE	NONE	NONE	3900P	3900P
L1003	QQR0779-001Z	QQR0779-001Z	QQL231K-2R2Y	QQL231K-2R2Y	QQL231K-2R2Y	QQL231K-2R2Y	QQR0779-001Z	QQL231K-2R2Y	QQL231K-2R2Y	QQR0779-001Z	QQR0779-001Z	QQR0779-001Z	QQL231K-2R2Y	QQL231K-2R2Y	QQL231K-2R2Y	QQL231K-2R2Y	QQL231K-2R2Y
R904. R956. R960	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	68	68	68	NONE	NONE	68	68	68	68
Q901	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	KRC102M-T	KRC102M-T	KRC102M-T	NONE	NONE	KRC102M-T	KRC102M-T	KRC102M-T	KRC102M-T
CN870	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-24	GGF1205F1-24	GGF1205F1-24	GGF1205F1-22	GGF1205F1-24	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-22	GGF1205F1-24
Q956. Q960	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	KTA1266/YG/-T	NONE	KTA1267/YG/-T	KTA1267/YG/-T	NONE	KTA1267/YG/-T	KTA1267/YG/-T	KTA1267/YG/-T	KTA1267/YG/-T

NOTES

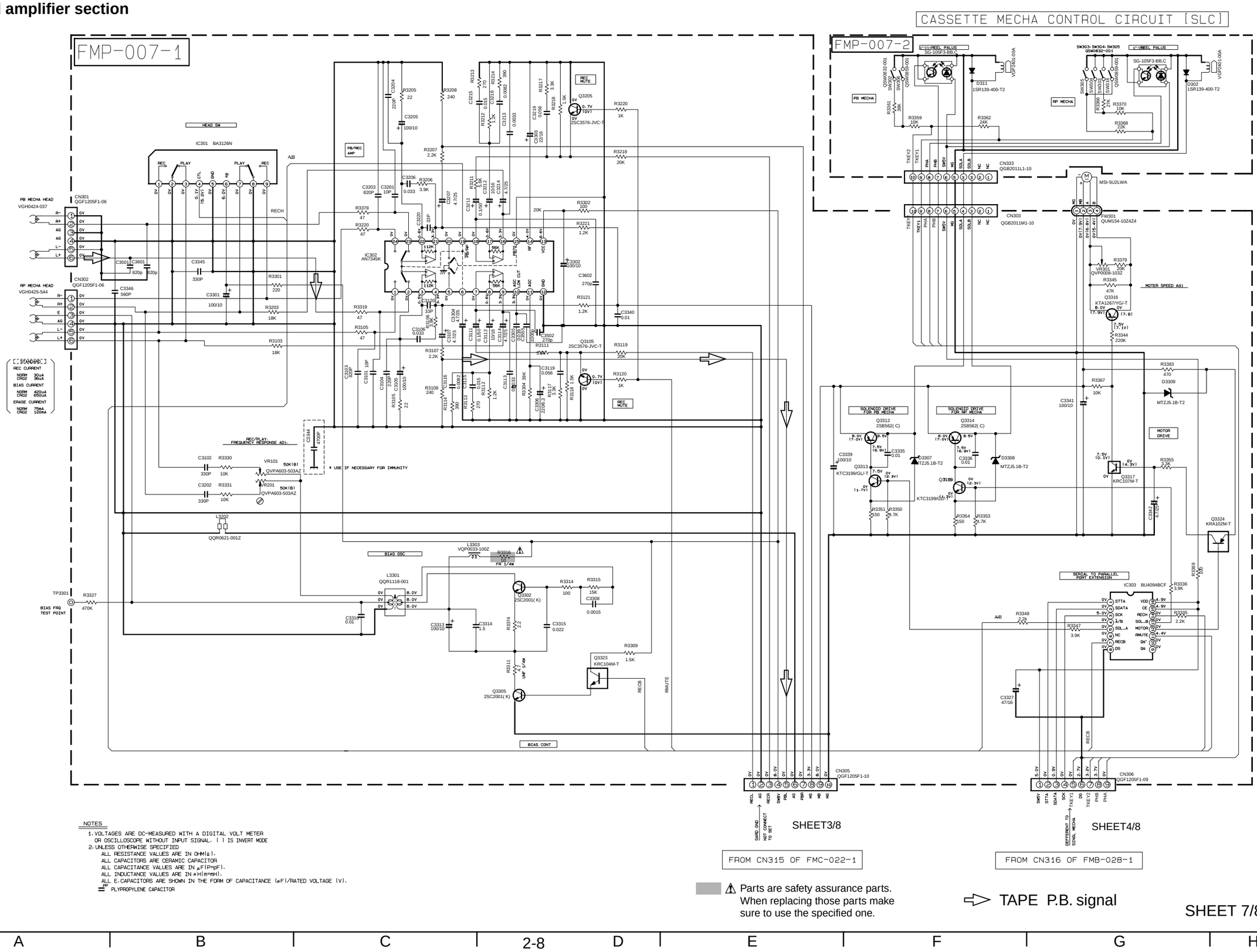
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL.
   CONDITION —— AUX MODE. VOL MIN. BASS OFF
2. UNLESS OTHERWISE SPECIFIED
   RESISTORS ARE 1/4W ± 5% CARBON RESISTOR.
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR OR MYLAR CAPACITOR.
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (uF)/RATED VOLTAGE (V).
   ALL DIODES ARE 1SS133

SHEET 5/8

■ CD servo control section



■ Head amplifier section



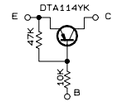
NOTES

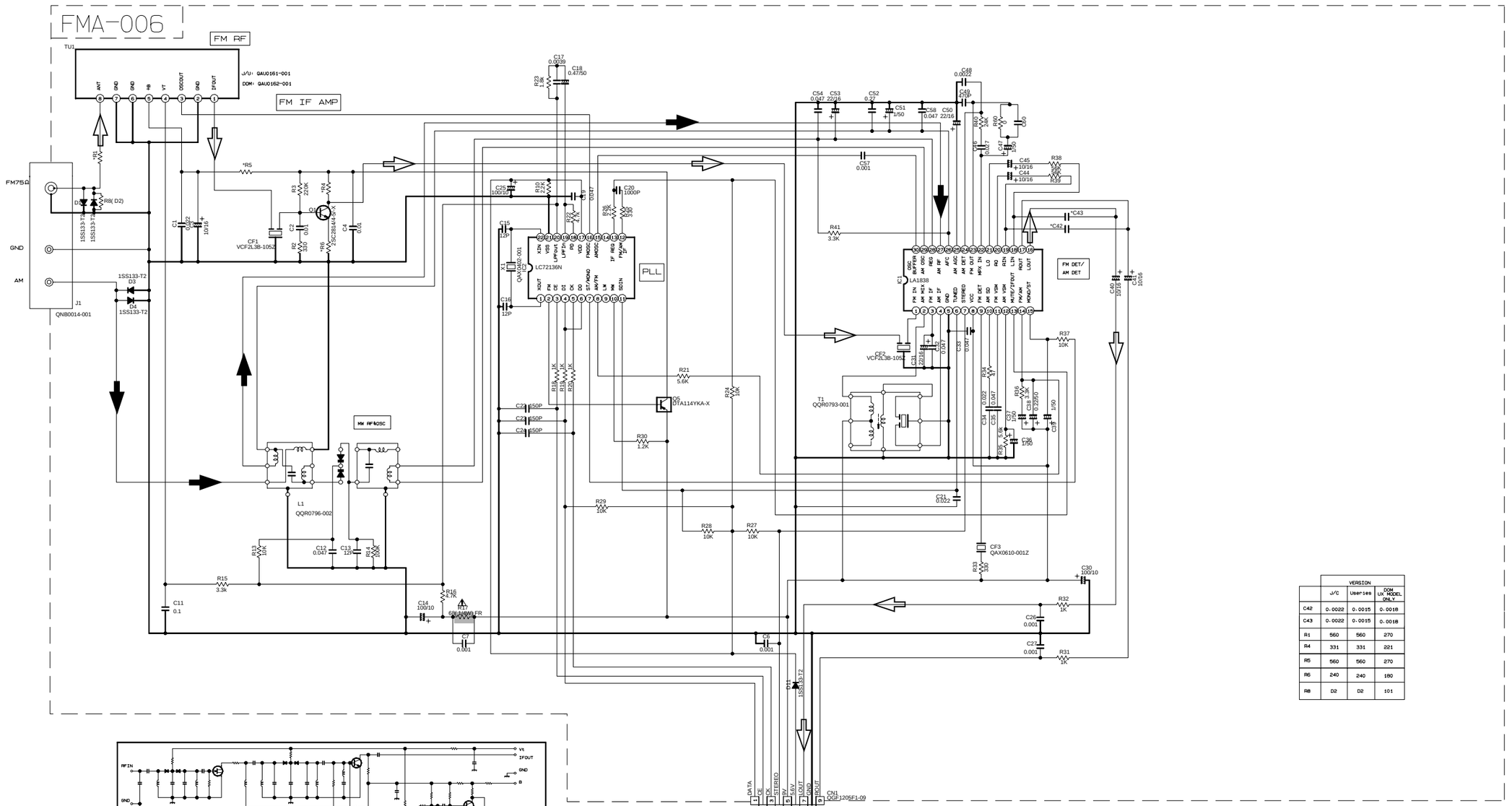
1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. ( ) IS INVERT MODE
2. UNLESS OTHERWISE SPECIFIED
   ALL RESISTANCE VALUES ARE IN OHM(Ω).
   ALL CAPACITORS ARE CERAMIC CAPACITOR
   ALL CAPACITANCE VALUES ARE IN μF(P=pF).
   ALL INDUCTANCE VALUES ARE IN μH(m=mH).
   ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
   PP PLYPROPYLENE CAPACITOR

■ Tuner section

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/8W ±5% METAL GLAZE RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM(Ω).
4. ALL CAPASITANCE VALUES ARE IN μF(P=pF).
5. ALL E.CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (μF)/RATED VOLTAGE (V).
6. SI DIODES (▶) ARE ALL 1SS133-T THAT CAN BE CHANGED TO SIMILAR DIODE SUCH AS MA165 OR HSS104J.
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.
   Q1 2SC2814/4-5/-X Q2.Q3 2SC2412K/R/-X
   Q4.Q5 DTA114YKA-X
8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.





	VERSION		
	J/C	Usaries	CDN UK MODEL ONLY
C42	0.0022	0.0015	0.0018
C43	0.0022	0.0015	0.0018
R1	560	560	270
R4	331	331	221
R5	560	560	270
R6	240	240	180
R8	D2	D2	101

	CONDITION PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
IC1	FM NO SIGNAL	3.6	8.9	3.6	3.6	0	5.0	5.0	8.9	8.9	1.3	0.1	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.5	3.5	3.6	3.6	2.7
	FM 60dB STEREO	3.6	8.9	3.6	3.6	0	0	5.0	8.9	8.9	1.3	4.3	0	0.9	7.8	7.8	4.3	4.3	4.3	4.3	3.4	3.4	2.8	3.4	0	0	3.6	3.6	3.6	3.6	2.7
	AM NO SIGNAL	3.5	9.0	3.5	3.5	0	5.0	5.1	9.0	2.6	1.3	0	0	0.9	4.7	5.5	4.3	4.3	4.3	4.3	3.3	3.2	2.8	ust	0.7	0.7	3.6	3.6	3.6	3.6	2.1
IC2	FM NO SIGNAL	2.5	0	0	5.0	4.9	5.0	7.9	7.8	3.6	6.1	5.1	0	0	0	0	2.5	5.1	0.9	0.9	3.8	0	2.3								

Tr NO.	Q1			Q5					
PIN NO.	E	C	B	E	C	B			
FM 87.5MHz NO SIGNAL	0	7.1	0.85	8.9	8.8	0			
AM 522KHz NO SIGNAL	0	0	0	9.0	0	8.9			
Tr NO.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	0	0	0.7	0	0	0.7	0	3.6	0.7
AM 144KHz NO SIGNAL	0	0	0.3	0	0.3	0.3	3.6	3.6	3.6

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

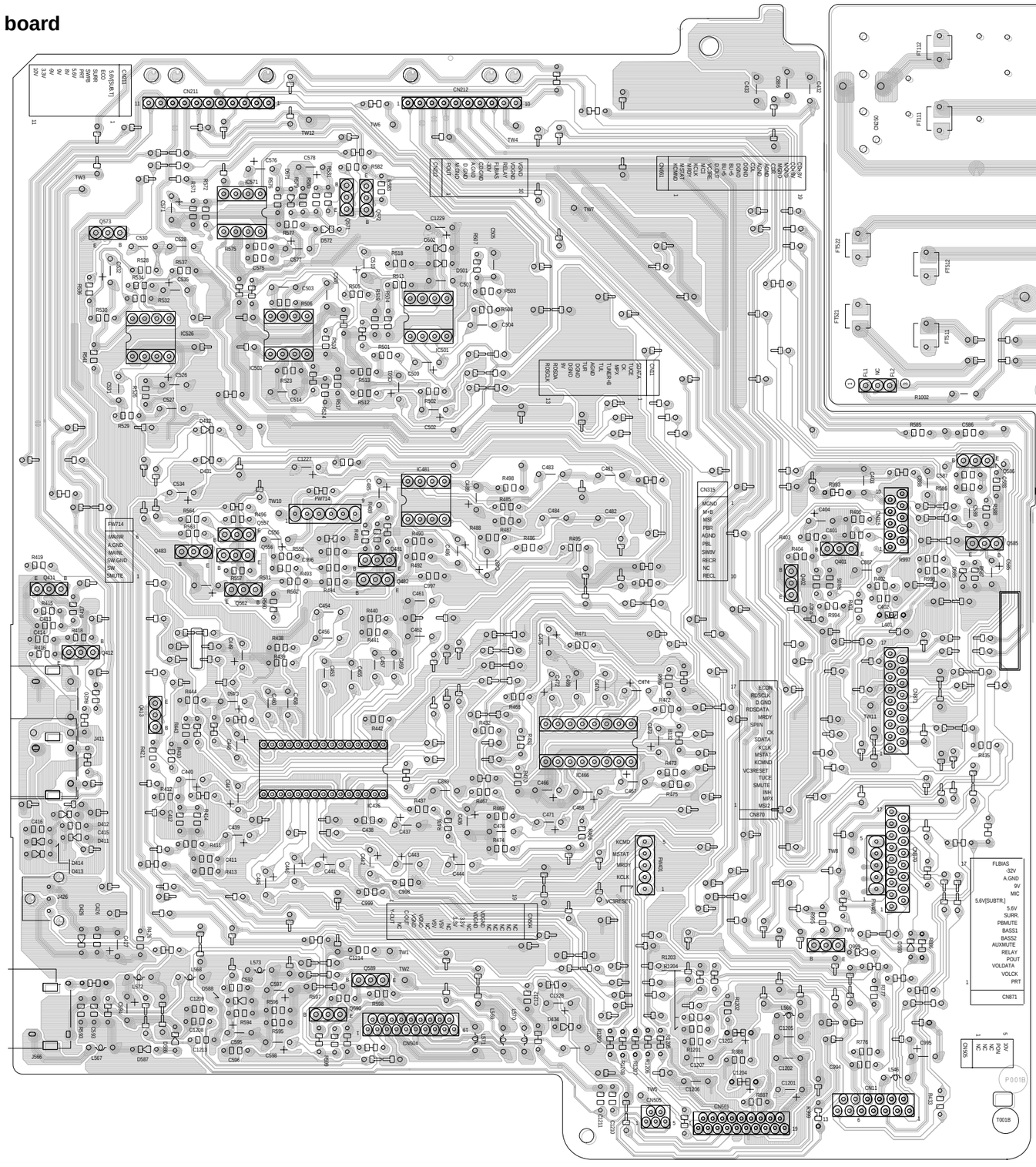
⇨ FM/TUNER signal

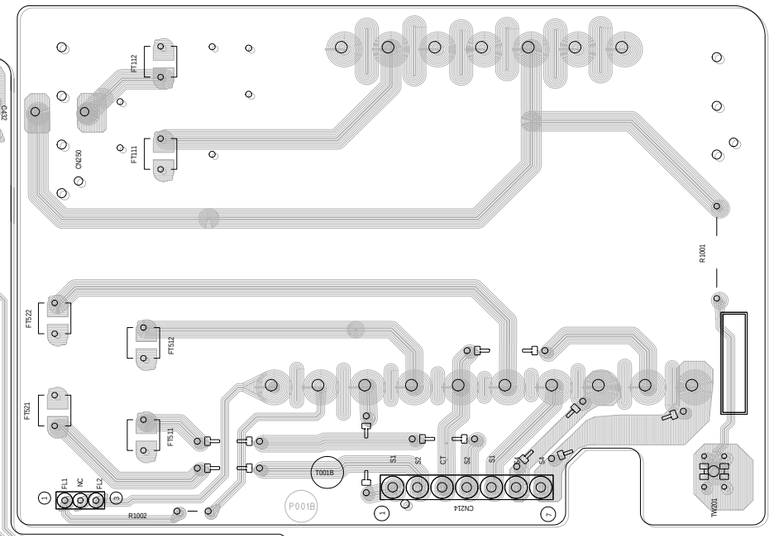
➡ AM signal

SHEET 8/8

Printed circuit boards

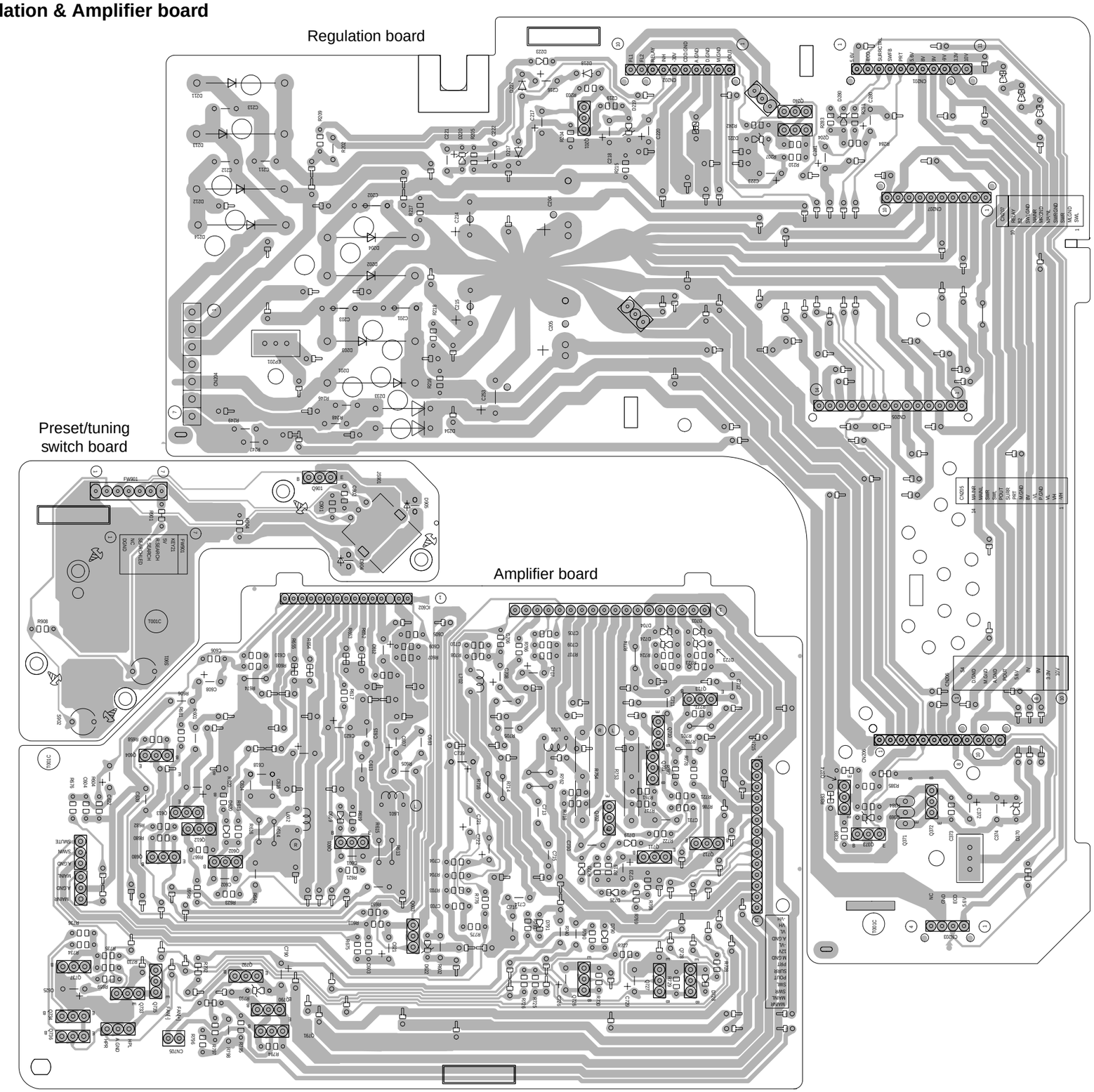
■ Main board





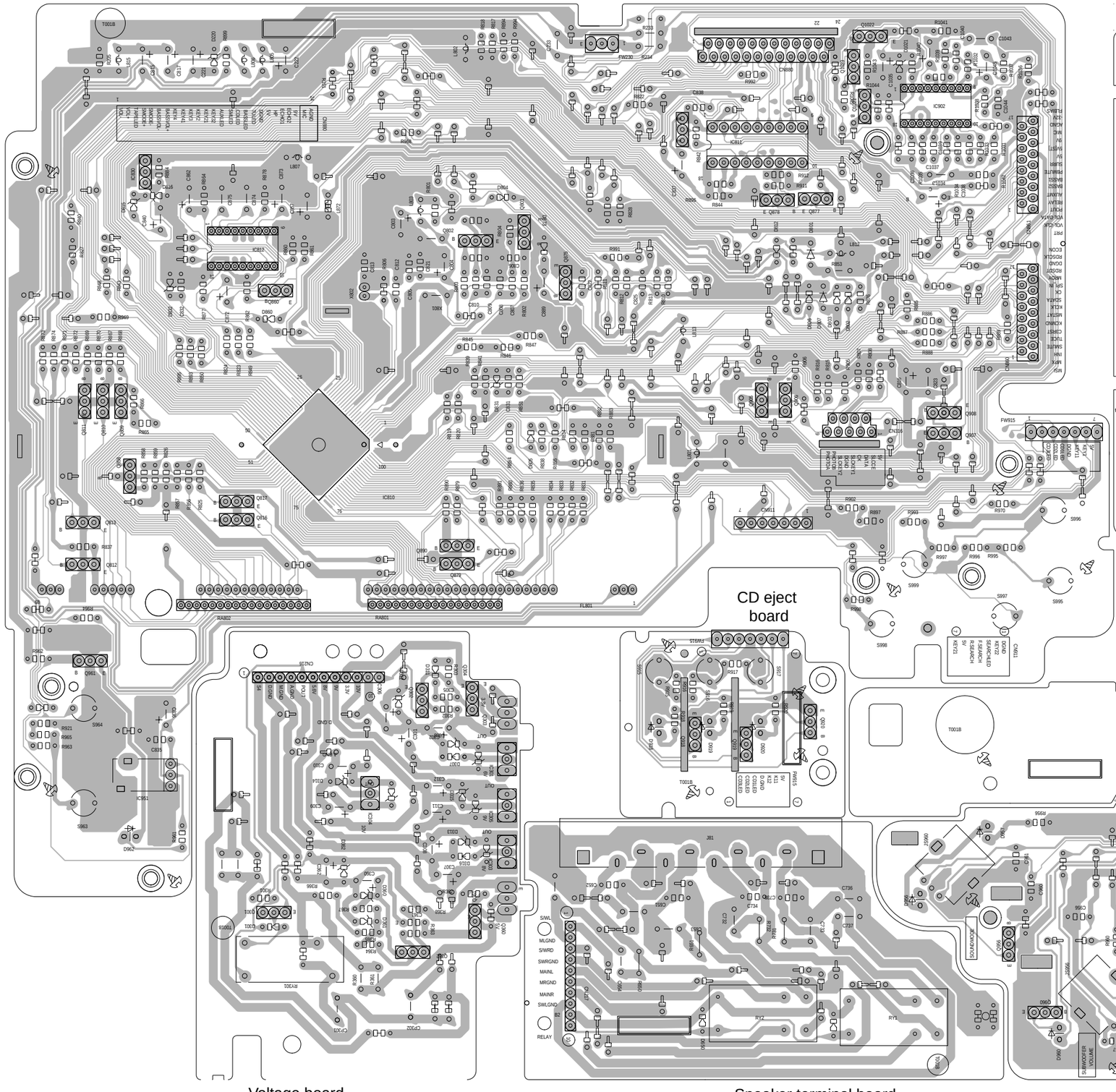
Transformer board

■ Regulation & Amplifier board

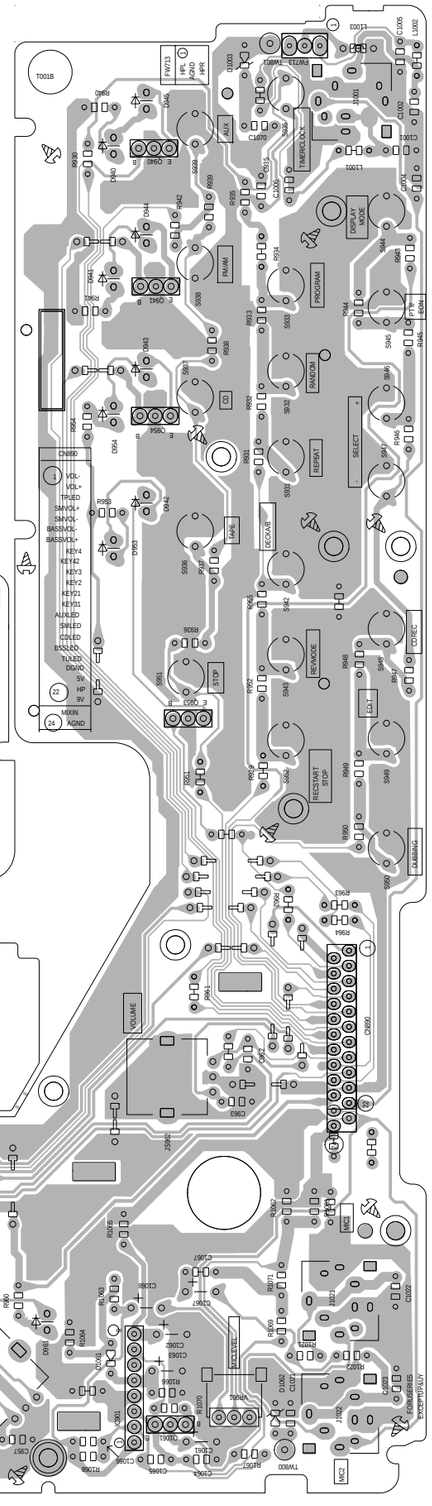


■ Front board

Display & system control board



Operation swicth board

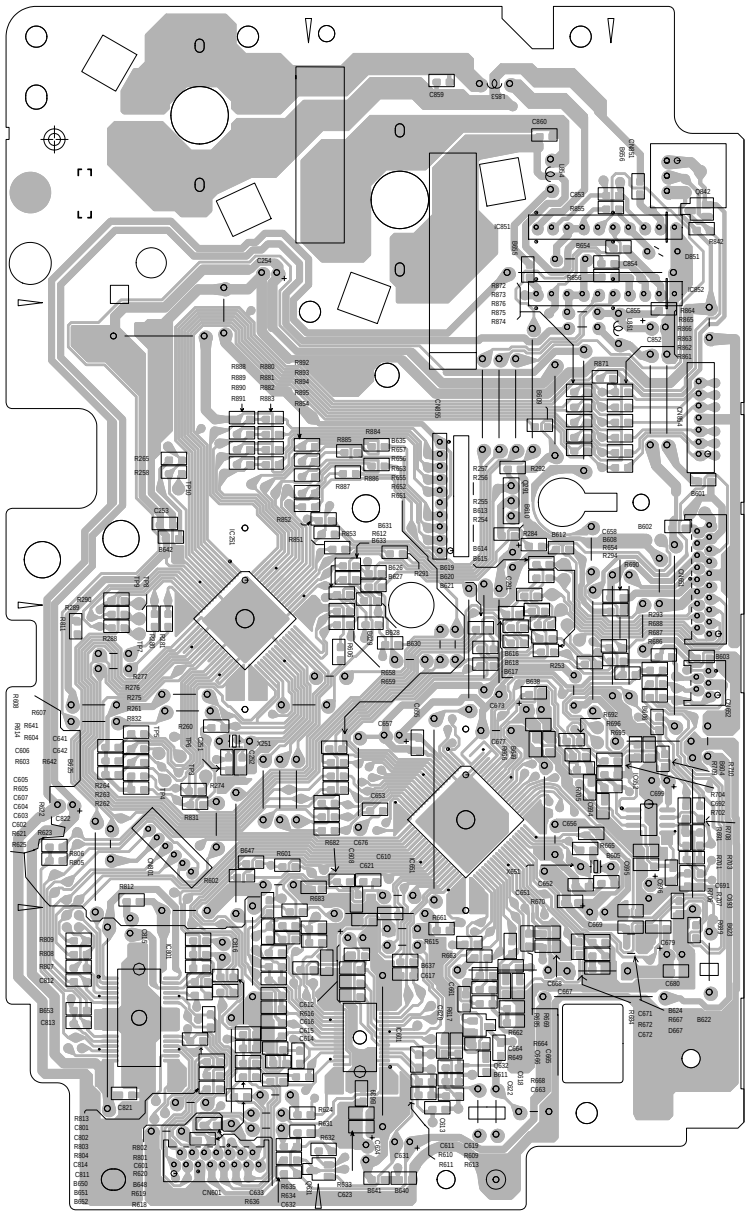


CD eject board

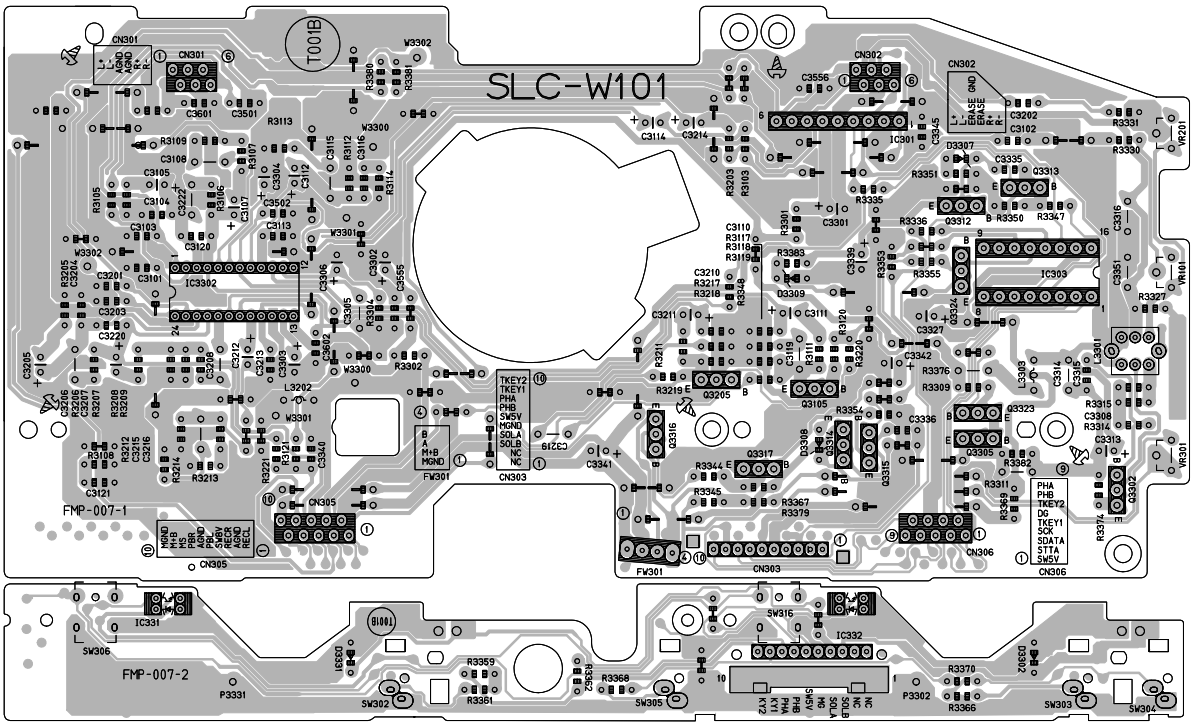
Voltage board

Speaker terminal board

■ CD servo control boad



■ Head amplifer & Mmechanism control board



■ Tuner board